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Sperm Morphology and Biometrics as a Means of Identification of the Individual

GERARD L. MOENCH, M.D.
New York, N. Y.

WHEN any deed contrary to law has been committed the prosecution must show first that the individual (or individuals) accused of the act has had the opportunity and secondly that he is identical with the perpetrator of the unlawful action. Contrarily, it is the purpose of the defense to disprove these points. Everyone is familiar with the usual procedure of law in such cases and with the usual criteria of identification, which consist in the simpler form of the appearance, the features, clothes and gait, etc., of the person suspected and more in detail often of the fingerprints and special peculiarities of appearance or habits, etc. Sometimes, however, a direct proof cannot be brought for or against the accused. Thus, in cases dealing with the question of paternity, the prosecution may only be able to show from the blood-groups A,B, AB,O, and M,N, that the child in question could be the offspring of the accused. The defense in other cases, however, may be able to show that the child could not possibly have been the child of the particular man under suspicion.

Again, in some cases of law the outcome may hinge on the analysis of a blood specimen and its determination as human or otherwise. In rare cases, where elliptical blood cells or such diseases as leukemia, filariasis, etc., are present, stronger circumstantial evidence may be adduced, although, of course, the blood of various humans cannot be differentiated except for the blood-groups mentioned. In every instance, however, any method of identification of the individual must be based on characteristics which are constant and peculiar to the particular person.

•

In working on the problem of human infertility I have met with a factor which I believe can be used as a method of identification in some cases. It is a factor which to date has been entirely neglected. I refer to the morphology and biometrics of the spermatozoa which in any specimen of semen are always peculiar to the particular man.

In investigating the problem of human sterility I was not satisfied with the procedure which considered a man fertile provided only that a fair number of motile spermatozoa were present. Accordingly, I investigated the morphology and the biometrics of the sperm cells in relation to fertility. Such a detailed semen examination seems, indeed, to allow of a definite judgment of the man's fertility, since in close to 300 cases my laboratory

findings and the prognosis based thereupon have not been contradicted by the clinical outcome of the cases.

TABLE I

Count of the Morphological Characteristics of the Spermatozoa of Patient K

Count		*Totals*		*Percentages*	
Normal	344	Normal	344	Abnormal	51
Narrow	14	Abnormal	356	Head changes	27
Small	67	Head changes	187	Body changes	14
Large	50	Body changes	98		
Tapering	27				
Thickened end knobs	10				
Amorphous and solid staining	5				
Round	14				
Cytoplasmic extrusion	13				
Naked body fibril	25				
Thickened body	55				
Coiled	32				
Undeveloped	15				
Double	24				

This patient and his wife had been married 3½ years and had never used contraceptives, but although the wife was normal she had never conceived. This man had 27% abnormal heads in the semen (normal limit around 20%).

Those readers interested in this phase of the problem I refer to my previous articles on this subject (Cf. literature 1-7).

The method I employed in these examinations was as follows: After the fresh specimen of semen had been examined in the usual way (checking the motility of the sperm cells at intervals of 20-30 minutes for 4-5-6 hours), very thin smears were made on glass slides. These were air-dried and fixed with heat (and alcohol if they were to be permanent specimens).

The mucus in the semen was then dissolved with a 1% chlorozene solution for about 2 minutes and the specimen stained with the following solution

Ziehl-Neelsen Carbolfuchsin	50 parts
Saturated alcoholic solution of Gruebler's (bluish) Eosin	25 "
95% ethyl alcohol	25 "

for three minutes, washed off with distilled water and stained for a few seconds with a standard methylene blue solution diluted 4 times.

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The normal and abnormal sperm forms were then counted with an oil immersion lens and a 10X ocular and tabulated as shown in Table I. After this the specimen was projected onto a miniature screen at exactly 3000 diameters magnification and the headlengths of the spermatozoa measured in ½ mm. and a graph constructed as shown in figure 1 (for details of the technique see: Moench, *Am. J. of Obs. & Gyn.*, April, 1930[8]). The functions of the graph were then calculated. Of course, no specimen showed all the sperm cells to be normal nor were all the sperm heads ever of the same length. By repeated examinations of different parts of the same semen sample, and by examining repeated samples from the same man, we established the important fact that the sperm morphology made up of the different types of cell changes, and the size and variability in size of the sperm heads, were constant and characteristic for the particular individual so that we could, from an unknown specimen of semen, determine who the patient was if we had a previous report on the semen of the same man. The only condition which affected spermatogenesis and could change the seminal characteristics was severe disease of the patient. In the absence of such an affliction, however, the seminal picture remained constant and typical.

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To further test out the constancy of the seminal characteristics, we mixed semen with various diluents and dried and redissolved semen without, by these various processes, changing in any way the character of the sperm-cell forms peculiar to the particular specimen under examination (See Table II). Of course strong acids or caustics affected the sperms, but any agent within reason caused no alteration in the seminal morphology and biometrics.

We have thus in the seminal morphology and biometrics a constant which is peculiar and characteristic under ordinary conditions for the individual. Only disease or old age will slowly change the microscopical picture and even then its relation to the previous findings is at once evident. While many different semen specimens will naturally have the same percentage of abnormal forms this percentage will, in the different cases, be made up of varying percentages of the different types of sperm abnormalities, so that for practical purposes it may be regarded as impossible that two different men should show exactly the same percentages of the various types of abnormal sperms, the same average size and the same variability of the size of the sperm heads producing identical graphs.

TABLE II

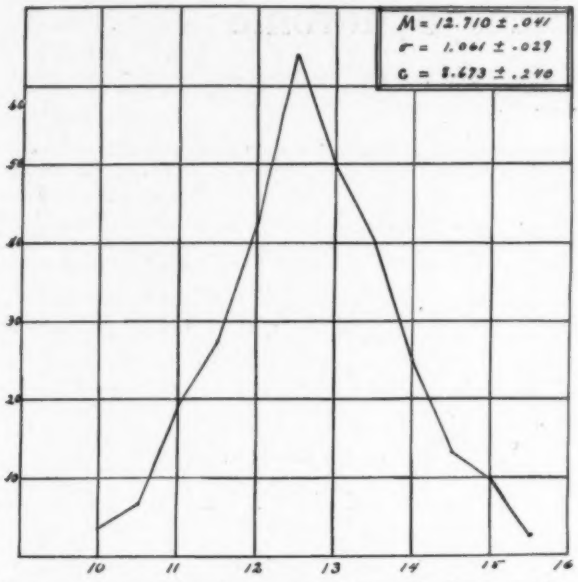
Three calibrations of 100 cells each made on the same specimen of semen which had been divided into three parts and placed in separate containers to determine whether or not the possibility of the container affecting the size of the cells had to be reckoned with. The containers were: No. 1, a clean glass vial; No. 2, a skin condom; No. 3, a rubber condom as obtained from a dealer. The three portions of the specimen were calibrated in the usual manner at a magnification of 3000 diameters.

	9.5	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5	15	15.5	16	16.5	17	17.5	18	18.5	19	19.5	20
I	—	1	—	2	5	6	8	10	13	16	15	10	7	3	2	—	—	—	2	—	—	—
II	—	—	2	2	1	8	10	11	16	18	10	11	3	2	2	1	1	1	1	—	—	—
III	1	1	—	3	3	5	8	7	13	15	12	11	7	5	3	3	1	—	1	—	—	1

The figures above the lines represent millimeters. The figures in the three horizontal rows represent the actual number of cells of the particular head length (at a magnification of 3000) counted. While there is some variation to be noted in the three columns, it is not more than one would expect to see. It is evident that there is no actual change in the size of the cells as the high number in each instance is to be seen at 14.0 millimeters. The tabulation of the abnormal forms also was almost identical in the three portions of the semen specimen.

We can also prove mathematically that the differences in these three samples are due to random sampling. Grouping the classes together in millimeters, since the half millimeter units here are too small, as shown by one or none of the sperm head lengths falling in some of the groups, we find that the mean on I equals 14.09 ± .098; on II, 14.01 ± .098; and on III, 14.29 ± .111; the standard deviation on I equals 1.45 ± .069, is the same for II, and for III equals 1.64 ± .078. The coefficient of variability for I equals 10.29 ± .49; on II, 10.35 ± .49, and on III, 11.47 ± .55. We have then, taking the greatest differences in the results, a difference of mean in II and III of .28, and of standard deviation of .19, and a difference in the coefficient of variability between I and III of 1.18. Calculating the probability of error on these differences, we get .28 ± .149, .19 ± .104, 1.18 ± .737, that is, the differences are in no case even twice the probability of error, and therefore are of no significance but due to random sampling.

Identical results were obtained when a semen specimen was dried and redissolved in normal saline or Ringer's solution.



The figures on the horizontal line represent mm. The figures on the vertical line represent the actual number of sperm heads of this particular length (at 3000 magnification). Graph perfectly normal. This man and his wife were normally fertile clinically.

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While the described method of semen examination may not often be of importance legally, still there are cases, for instance of rape, where it would be possible with my method to establish the important point that the semen specimen obtained might or might not have come from the accused. The Scottsboro mix-up, for example, is a case in point. Proper examination of semen spots, if present, might very likely have cleared up the whole notorious affair very quickly.

I offer the method of semen examination described as one which may, it is true, not be often applicable but in selected cases may be of definite value.

Conclusions:

1. Under ordinary conditions the morphology and the biometrics of the semen are constant and for all practical purposes definitely peculiar for the particular man.

2. Identification of an individual man from the detailed examination of his semen is possible if, as is the case with fingerprints, a comparison can be made.

3. In cases of rape, etc., such semen examinations may in some instances be of great value.

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30 East 58th Street.

Cancer, heart disease, arterial disease and cerebral hemorrhage are on the increase.

That thing they call personal magnetism goes with a knowledge of medicine. It is the doubter who is not magnetic.

Surgery of the Lung

When surgery has scored some notable successes in face of medical failure the tendency for a time is towards rapid surgical progress. Such a tendency is now conspicuous in the treatment of pulmonary diseases. By years of endeavour the 10- to 11-rib extrapleural paravertebral thoracoplasty was so far perfected that it came to rank as a standard operation for a certain group of cases. No sooner had this stage been reached than various surgeons began to apply their experience to a further reduction of the mortality and to a stricter limitation of the operation. The earlier results of the localised apical thoracoplasties were somewhat disappointing because collapse of the upper ribs was hindered by the rigid arching of the lower. This was especially evident when large tuberculous cavities had to be collapsed. Further experience showed, however, that by increasing the length of bone resected from each of the upper ribs, a very extensive apical collapse could be secured without grossly impairing the function of the lower lobe.

It was natural to hope that equally good results would be obtained in bronchiectasis, but efforts in this direction proved discouraging, especially when the larger bronchi or the lower lobe were involved. By this time, however, thoracic surgery had received its impetus, and bolder methods such as the excision of the affected lobe or lobes seemed to offer a possible means of curing the disease. At first there were some brilliant results, but a mortality of 50 per cent seemed much too high for any but the most daring. The idea of lobectomy was right, but the technique required a great deal of improvement. How far this improvement has been attained in the last few years may be gathered from a paper lately written by Mr. J. E. H. Roberts and Mr. H. P. Nelson, of St. Bartholomew's Hospital. Using a technique slightly modified from that advocated by Brunn and further elaborated by Shenstone and Janes, they performed lobectomy in ten cases during the eight months May to December, 1932. The condition of their patients in May, 1933, was a striking testimony to the progress that has been made. To take the possible failures first, one patient died after ten days from a cerebral abscess, but the post-mortem examination gave justifiable grounds for assuming that this had started to develop before the operation. A second died three months after the lobectomy from an influenzal pneumonia. Of the remaining eight, six were healed and free from symptoms, while the other two were back at work, though not entirely cured. The lobectomy in eight of these ten cases was done for bronchiectasis and in the remaining two for carcinoma. Roberts and Nelson are strong supporters of the one-stage operation, in which the lobe is cut away and the stump is closed by sutures, as opposed to the two-stage in which the lobe separates as a result of strangulation. One of the great difficulties in lobectomy is the limitation of the infection, and this is effected in the one-stage operation by completely closing the chest wall after the insertion of an air-tight drain into the base of the pleural cavity. This drain is connected by a tube which opens under water in a Woulfe's bottle. The negative pressure in the chest causes the remaining lobe, or lobes, to re-expand and gradually fill up the whole pleural space. The one-stage lobectomy is, moreover, a more truly surgical operation than the two-stage, which necessitates waiting for the lobe to separate by sloughing.

An even more remarkable achievement is reported by Evarts Graham and J. J. Singer, who have successfully removed an entire left lung together with several mediastinal tracheo-bronchial glands. In this case the patient had a squamous carcinoma of the bronchus of the upper lobe which projected slightly into the bronchus of the lower lobe. Not only were the whole lung and the glands removed at one stage, but in addition, seven ribs, from the third to the ninth inclusive, were resected from the transverse processes to the anterior axillary line. This was done in order that the soft tissues of the chest wall could collapse against the stump to obliterate, so far as possible, the pleural cavity. Although a small empyema developed in the upper part of the cavity, the wounds were all healed in three weeks. The latest report, four and a half months after the operation, was very satisfactory.

In considering the brilliance of these results—and they are very brilliant—one must be grateful also for the steady advance in methods of anaesthesia. This has done much to enlarge the sphere of surgery; and it will do more.

—*The Lancet.*

Persons who are underweight seem to live longer than those whose weights are normal or above normal.

Radiography in Ulcer Syndrome

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THE incidence and frequency of ulcer patients confronting the physician have prompted the origin of this article. Quite often the doctor is called upon to treat a patient complaining of abdominal symptoms, and often enough in his hurried cursory examination is wont to pass this patient up, labelling and treating him as a neurasthenic. This patient is allowed to go on without proper response to medical treatment, until, in utter disgust, the doctor finally resorts to a radiographic examination, and then becomes both perplexed and surprised through having overlooked an ailment which could have long been alleviated medically or surgically. Sometimes disastrous effects develop from the use of this all too long supposed expectancy treatment. It is my purpose, in this article, to make plain the proper determination and interpretation through radiographic gastric series of a very common abdominal ailment which is often overlooked.

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For a proper study of the gastrointestinal tract, the necessity of a bariumized meal is obvious, since with this contrast medium we are in a position to study the relative phases of the tract in action. The patient is withheld from medication and enemata for at least forty-eight hours prior to the examination. The night before, he is instructed to have a light supper such as two pieces of toast, a soft boiled egg and a cup of tea. In the morning he is to partake of a breakfast consisting of a dish of well cooked oatmeal into which two ounces of barium sulphate are mixed, plus a little sugar and cream. He can also have a glass of milk, a piece of toast and a soft boiled egg. When this meal is finished he is restricted from any further food or water until six hours later, when he reports for examination. At this time a single upright picture is taken to determine the advancement of the barium meal, the presence or absence of gastric or duodenal residue, any abnormality in the tract, or any extrinsic changes present. The patient is then fluoroscoped and the findings of the six-hour plate are corroborated. At this time the stomach presents itself in the form of a pear-shaped gas bubble with its apex downward. If this gas bubble is half moon-shaped, it is indicative of some existing disturbance. If fluid is present, palpation will set up a fluid wave and barium traversing this area will give a picture as though molasses were dropping through water. This is an indication of the presence of a hypersecreting stomach. In the average case, a meal after six hours should be out of the stomach and in the jejunum, ileum, cecum, ascending colon, and up to about the mid-transverse colon. If it is beyond this area, it is referred to as a colonic hypermotility, probably due to a rapidly acting stomach and small intestine. If the meal is in the cecum and below Cannon's node (2 inches beyond the hepatic flexure), it is referred to as a hypocolonic motility, probably due to a sluggish stomach and small intestine. If the meal is scattered, there may be some gastric and duodenal residue, which is confirmed by a sediment mixture which consists of 1 ounce of barium and 4 ounces of water; this drink, when swallowed, will fuse with the shadow seen after the six-hour meal. The sediment meal helps us to study (a) the tone of the stomach, i.e., whether or not it holds its sausage shape, (b) the mucous membrane, whether or not the stomach rugae are distorted, (c) the antral activity, whether early or delayed, (d) the peristalsis, whether increased, and also (e) whether or not there is pyloric patency. With these determined, the patient is then given two drinks, each consisting of an ounce of barium in 4 ounces of water, for a morphological study. This helps us determine (a) the type of stomach, namely hyper, hypo, ortho or subtonic, and whether or not it is suited to the status or habitus of the patient, (b) the size of the stomach, it being from 10-11 inches long with a maximum width of 3 inches, (c) the stomach axis, whether vertical or oblique, (d) the position of the stomach, whether or not shifted from its proper bed, (e) the mobility of the stomach, i.e., extent of motion upward and laterally, the point of mobility extending from the cardiac end of the stomach to the summit of the bulb, where the hepatoduodenal ligament is located (to the right of the spine between the second and third lumbar vertebrae)—the mobility of the pyloric end is 1½ inches either way, (f) pain and tender points over the stomach and bulb, (g) the greater and lesser curvature of the stomach in relation to the anterior superior interspinal iliac line. Practically the same study of the stomach holds for that of the duodenum. The esophagus is also studied as the barium passes from the mouth into the stomach. X-ray plates are then taken in the upright, prone and oblique positions. A multigram of the duodenum is taken for proper morphological study. The small intestines are studied for their motility and distribution of the barium. The colon is also studied for size, shape, position and motility of the barium mass. 24 and 48-hour plates are taken to study the colon and the appendix. Elicitation of pain and tender points over these areas is of extreme importance.

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The foregoing discussion gives just a cursory idea of what a radiograph of the gastrointestinal tract should reveal. In ulcer cases, deviations from the aforementioned findings manifest themselves in the following signs:

1. Hypersecretion
2. Disturbed peristaltic activity
3. Change in tone
4. Altered motility
5. Abnormal retention
6. Spasm or contracture
7. Pain and tender points
8. Resultant constriction and obstruction
9. Local displacement or fixation
10. The defect

I. *Hypersecretion:* The continued pouring out of excessive amounts of gastric juices acts as an irritant to the mucosa. There is increased secretion in ulcer cases. This is manifested radioscopically by the presence of a fluid wave in the gas bubble, and also, by the dropping of the barium through this secretion, like molasses falling through water.

II. *Disturbed peristaltic activity:* Due to the presence of an irritated mucosal wall, nature sets up increased peristaltic waves to overcome this change. In

an obstructive benign ulcer, there may be long periods of quiescence with short periods of hyperperistalsis. In a more recent pyloric and beginning-to-be obstructed ulcer, we may have long periods of hyperperistalsis alternating with short periods of quiescence.

III. *Change in tone:* Wherever there is an irritated ulcer we have increased tone, and this brings about contracture. In pyloric obstruction due to an old shrinking callous ulcer, the tone is lost.

IV. *Altered motility:* Motility is increased where the ulcer is irritated. A lesion which is obstructive in character will cause delay in motility.

V. *Abnormal retention:* The amount of retention is small in the irritated type of ulcer, and may be seen in the ulcer crypts or craters, as well as in the stomach *per se*. In the obstructive lesion, the retention may be large. Here pressure and palpation is of importance, since if the lesion is truly obstructive in character, there will be difficulty in evacuation.

VI. *Spasm or contracture:* These vary from a deep contracture wave, which is usually situated opposite the ulcer site, to an exaggerated pyloric wave, or to a constriction with formation of a tube effect, according to the varying spasms. The nearer a lesion is to the normal contractures, the more likely a spastic condition. Since most ulcers are situated on the lesser curvature, we are more apt, therefore, to get a cardiospasm.

VII. *Pain and tender points:* This is of importance, since the maximum point of pain and tenderness, when palpating the stomach and duodenum, is usually located near the ulcer niche.

VIII. *Local displacement or fixation* is due to resultant adhesions or peri-involvement of stomach and duodenum.

IX. *Resultant constriction and obstruction* are due to the continued irritation at the ulcer site. Nature is constantly effecting changes in an attempt at repair and, in so doing, forms an annular constriction band, which, if kept up, becomes obstructive in character and impedes the normal activity of the organ, this being the underlying basis of pre-malignant change.

X. *The defect:* Ulcers may only manifest themselves in the disturbed functional signs as heretofore explained, without the characteristic defect. There may be little erosive areas which do not show up on the x-ray film. Likewise, hemmorrhagic, flat, florid and sometimes saddle ulcers may show no defect. The visible ulcers present their defect in the form either of a line, a hill and valley effect, a serrated tube type, and finally in the typical niche or bud appearance. These are commonly seen on the lesser curvature of the stomach. All these visible defects are seen to change the contour of the stomach. In carcinoma of the stomach, the contour is usually wiped out. The long standing, non-inflamed type usually gives the greater defect. The cardiac end of the stomach is usually the most quiescent area. Opposite and just above this defect is seen the contracture wave, which may be narrow, deep and smooth, and is found usually on the greater curvature side. These contractures, when due to ulcer, even though they disappear, recur invariably in the same place, whereas organic constrictions are constant. The duodenal ulcer defect is also seen on the lesser curvature side and presents the same aspect as the gastric type. The contracture wave here is also present on the greater curvature side. The duodenum very often gives a clover leaf appearance.

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The following are salient features found in the various types of ulcers:

In ulcers of the pars cardia, we recognize the following:

1. Presence of defect on lesser curvature side may or may not be visible.
2. Presence of cardiospasm.
3. Evidence of spastic contracture on the greater curvature side opposite ulcer.
4. Area of pain and tenderness about ulcer site.

In prepyloric ulcer we recognize the following:

1. Defect on lesser curvature site.
2. Large medium residue.
3. Atony of the stomach.
4. Dilatation of the stomach.
5. Stages of increased peristalsis alternating with quiescence.

In pyloric callous ulcer of the stenotic type we find the following signs:

1. Defect present usually small and prepyloric.
2. Large residue, usually crescentic in shape.
3. Dilatation of the stomach.
4. Atony.
5. Period of quiescence alternating with exaggerated or reversed peristalsis.
6. Displaced pylorus—upward and to the right.

Duodenal irritation and ulcer present the following features:

1. Defect on lesser curvature; clover leaf-like appearance.
2. Hypersecretion.
3. Hyperperistalsis.
4. Hypermotility.
5. Contracture on greater curvature side.
6. Pyloric sluggishness.
7. Displaced pylorus—high and to the right.
8. Pyloric and bulbar residue.
9. Pain and tender point.

In conclusion it can readily be seen that

I. Ulcer cases need not present the characteristic defect for a proper diagnosis, but rather a conglomeration of the findings is sufficient;

II. Early radiographic recognition of these pathologic changes is an aid to the better care and treatment of the patient;

III. With the use of x-rays, better opportunity is afforded to determine whether a case should be treated medically or surgically;

IV. Differentiation of ulcer types can be made by x-ray examination;

V. Gastrointestinal radiographs are of importance in identifying or ruling out malignant changes.

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Effect of Tonsillectomy on Development of Immunity to Scarlet Fever, as Shown by the Dick Test

CAMILLE KERESZTURI and WILLIAM H. PARK, New York (*Journal A. M. A.*, Sept. 2, 1933), determined the effect of tonsillectomy on the development of immunity to scarlet fever by observing whether the children who react positively to the Dick test before the removal of their tonsils and adenoids become immune when tested six months later. During a period of a year and a half, 492 patients, admitted to the authors' hospital for tonsillectomy and 675 children for other causes, received an initial Dick test. The tests were read twenty-four hours after they were done. The children selected for tonsillectomy were compared with those used as controls. The two groups ran fairly parallel with each other. There were 11 per cent less positive Dick tests in the control group. A change to a negative reaction occurred in 9 per cent of those not operated on and in 15 per cent among the newly tonsillectomized patients. This difference is hardly sufficient to prove that it was due to tonsillectomy.

How to Reduce By Eating

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IN spite of controversy, disagreement, change of opinion and uncertainty there is advancement in medical science, but nevertheless the fat man is still with us and is calling for help.

In my lectures to those interested in getting away from a too generous somatic equator my audience has received with surprise, yes, distrust, the statement that "The way to reduce is by eating," or, "It is possible to lose weight by the teeth." Both basic, both true.

Let me cull two authentic cases, as examples, from many which have come to me during the past half century.

Case No. 1.—His age was 49, his extremes of weight for fifteen years in ordinary clothing—minimum, 198 pounds, maximum, 217 pounds. Chest varying but little, 42 inches; waist, tailor's measurements, 43 to 44 inches. Experiments began about the middle of June but with no systematic application until the middle of July and no noticeable change.

Then regulated methods followed as he was thoroughly converted. On October 10th, as a result of using the teeth (of course some accompanying conditions), the weight was 163 and stationary. Loss 54 pounds, chest 42 and waist, tailor's measurements, 37 inches or approximating the "athlete's ideal" for that age.

Case No. 2.—The writer's own experience: By careful application and study, reduced 13 pounds in twelve weeks, and waist measurement by four inches. Age 71 years. Body in fine condition.

In the mouth are certain guardians called taste buds, then comes a Hercules, the stomach, which also protects us, and after that many feet of canals which also have a decided voice in the matter of intake, digestion, and assimilation. If a person eats rapidly the food is not masticated, is not properly lubricated to make a bolus, the digestive ferment in the saliva is passed by and the taste buds fail in their function.

Bulky pieces of food are hurried into the stomach where the gastric juice and hydrochloric acid are called upon to do the work of the teeth and they rebel, so the food is carried on to the intestinal tract but is not in good condition to be further changed by the ferments there, hence a degenerated mass of food which cannot be properly digested and is not assimilated as it should be. Result: Stomachic disorder, bad breath, coated tongue, stomach rebellion and intestinal confusion resulting in bodily ailments that may be partially and temporarily assuaged by patent medicine or digestants procured from the drug store.

The physician may say "I have heard this gospel all my life. It is not new". I iterate "Neither is the Lord's prayer, the doxology and the ten commandments," and I hit the nail hard on the head when I further add, "We don't know the last mentioned." Possibly what I write is not new to the physician, but much of it is to the patient and so I ask that we pass it on to those who do not understand. A rich, wide experience leads me to tincture my statements with ipse dixitism.

Facts

1st At about forty years of age many men and women put on fat.

2nd This adipose tissue interferes with the action of both heart and lungs and detracts from the efficiency of the VEGETATIVE organs.

3rd There is one source of fat and that is food certain kinds of which seem to be more effectual than others in making fatty deposits.

4th If over-eating is the cause then remove the cause.

5th This can be done if the chubby subject has will power and will stand by the rules.

6th It is more appealing, especially to women, to eat appetizing foods than to shun them.

7th If there is too great an intake of food, more than the body needs, the surplus is stored as fat, like a bank account, but unlike the bank savings, this surplus is hard to draw out, and in most cases is left in the safe.

Those who have given the matter attention will agree with me as I am not discussing pathological cases that might be the result of other causes.

It is possible to safely lower the weight if the patient will cooperate, but in too many cases these patients are not honest either to themselves or their physicians, for they will not report accurately the modus operandi of accumulation or reduction. If they make out a dietary they fail to include every little extra in the way of foods and these "extras" are a prolific cause of fatness. Note how many cooks are not thin, for they accumulate by continually tasting what they prepare for the table.

I now come to the crux of the subject, namely, how to reduce by eating. We consume food because the body demands it, because it tastes good, looks good and smells good, so three senses impel us to be immoderate. Sometimes the humorist says we can hear persons eat, but that is irrelevant.

The body demands a certain amount of food which varies with age, activity, fatigue, sickness, etc., and in ordinary cases the amount of provender taken into the system need not necessarily be as large as it is, but there is another factor that exists and which causes damage and that is the taste or appeal of food. If a man eats what his body needs it is one thing, but if he satisfies the taste or appetite then the machinery is overloaded and if the digestive apparatus is normal the unneeded food is kept, turned into fat and stored near the factory, i.e., hip, waist, abdomen, thighs.

This deposit sticketh closer than a brother.

If food of any kind is well broken up by the teeth, the saliva comes in contact with minute particles and aids greatly in preparatory digestion and the taste buds are satisfied with much smaller portions and tell you when to stop eating. The other portions of the anatomy which digest and assimilate take enough for bodily energy, heat, etc. There is not only no increase of fat, but the bank account surplus (fat) is gradually used up and the weight reduced.

If for many years one has eaten rapidly and not reduced the food to minute particles, then it is no easy matter to eat slowly, so a new habit must be acquired. This can be done, but it requires patience. It pays well. To eat less, one must break up all food with the teeth, when both taste buds and stomach will be satisfied. One who does masticate properly is a slow eater and requires a much smaller amount of food. It goes without saying that the grinding parts of the teeth must be normal.

Remember that the body dictates and always sends out an S.O.S. when one is unwise in eating, and if our patient fails to respect this call he pays the price, for Nature always gets a receipted bill for failure to respect

her laws even if she waits several years. There are no exceptions.

In ninety-five cases out of every hundred when a patient consults a physician he mentions diet and there is a reason.

The stomach and the intestinal machinery warn you, but the food is so appealing that long after the body demands are satisfied you continue to eat because it "tastes so good."

You at once ask, "Why is it that if the taste buds are guardians do we not cease eating after a moderate intake of food?" My reply is that the buds do not always come in contact with the tasty elements in food because often large pieces slip by and are not tasted, but pass on to the stomach in lumps, there to be broken up and digested by the stomachic juices, thus compelling the gastric secretions to do twice or three times the amount of work necessary and so they are overworked. Digestion is a costly procedure and physically expensive.

If these large particles pass into the intestines, they may "get by," but not without protest, and they will be stored as fat; but in a purely technical sense, the condition is pathological.

A good example of what happens when we fail to use the teeth:—Some time ago a well formed woman came to me because the abdominal girth was too large. Among other details I learned was her method of eating corn on the cob. Four ears at a meal, all well buttered and seasoned by condiments. Several bites at a time and rapidly swallowed. The digestive machinery being in fine condition, this over-supply of corn was digested and stored away as fat—but would she give up corn? I have tried chewing corn, succotash and similar foods and have found that slow and complete mastication led me to consume less than half of the usual amount.

Exercise

The majority of those wishing to reduce do not know how to exercise sanely. The order "Take exercise" is as sensible as it is to say "Go to a drug store and buy some medicine" but not indicate the kind.

It is absurd to be enticed by the alluring advertisements which say "Take my system and lose weight while you wait." The man who thus broadcasts reminds me of a harp struck by lightning. It is a blasted lyre.

Much harm has been and is being done by those who adopt certain muscular movements without knowing the condition of their own bodies.

When advised to consult their physicians they yawn but do not go.

Until one is certain that the heart and other somatic machinery will stand the demands made upon them one should not blindly take up any scheme of bodily development. A number of my patients have permanently injured themselves by thus acting. Don't go it alone.

Few indeed are those who will carry on and for two reasons. First, the work is monotonous and to this I say "Amen"; second, they forget or it is too much trouble.

One who is actually converted to the necessity of reducing will not backslide, hence my request that those wishing to lose poundage become thoroughly convinced that they must fight it out and that it will take time.

The skeptical subject will say, "These exercises are too simple, give us something strenuous." My answer is, "try them and not only momentarily contract the larger groups of muscles but hold them two minutes."

Strong, normal men of forty or fifty, who can safely play handball, volley-ball, or tennis may get enough exercise, but the average man will not even adopt the simple movements. Why?

Many of my women patients who, at the start, lose weight by reducing the food intake, become obsessed and continue beyond the bounds of safety. They are eager to approximate the unwomanly figure of broad shoulders and narrow hips and so they starve, the face becomes wan and wrinkled and they look and are aged, but they are "reducing" or "slimming" and happy.

Another unfortunate condition we face is this:—If the patient does reduce her sphericity by sensible methods, reaches the desired proportions and then stops, the weight comes back and she is discouraged.

Again, our subjects are afflicted with "Americanitis," or haste; they are not satisfied with losing from three quarters to one pound a week, but want that daily, hence the mischief.

The Exercises

Stand as erect as possible, lifting up the top of the head.
Arch the chest to the limit.
Place the scapulae flat against the posterior thorax.
Draw in the abdominal muscles as far as possible.
Deep breathing, oft repeated, is of course desirable.
These exercises bring strongly into action the erector spinae and associated muscles, all the abdominal muscles and those which keep the torso balanced on pelvis and femurs.
For the heart and lungs do a bit of rapid walking whenever there is a chance.
The above exercises should be taken thirty or forty times a day and as the work, walking excepted, can be done in one-half minute, little time is required, no suit, no gymnasium, no apparatus. There is no excuse for not exercising.
If our patient, either sex, will not do this the case is hopeless and one of the unhappy results will be one or more forms of ptosis with accompanying ills, a continued increase in fat and an ugly body.
Women resort to "stays" and some men to abdominal belts, but these appliances only postpone the evil day. They do not cure.
Ordinary walking is a reflex or mechanical act and as an exercise is not valuable, but rapid walking is.
There are, of course, other forms of exercise, but they are purposely not mentioned for it is hard enough to persuade persons to take even the few described above.

Women are rulers. They wish to be beautiful so resort to camouflage to enhance their attractiveness. Last year the national bill for "beauty preservers" exceeded a billion dollars. Today our women want boyish figures. It is easier to powder and paint than make the sacrifices necessary and go to the trouble of keeping it up.

Conclusions

It is possible to reduce the weight in a safe and sane manner provided the conditions are not too far over the threshold of pathological states.

The only way to reduce is to remove the cause of adiposity, i.e., eat much less.

If this is done there may be a variety in the kinds of food eaten.

A person who wishes to reduce must be born again so far as eating goes.

To keep trim there must be no return to the old time diet.

(Concluded on page 44)

Intestinal Toxemia

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IT requires considerable fortitude to present for scientific consideration a topic which has few, if any, adequate scientific criteria by which to adjudge it. One is reduced at the start to the purely empirical method of watching the results of treatment, the *post hoc propter hoc* judgment of "before and after taking." If the therapeutic results, however, are sufficiently consistent and impressive, it should be permissible to speculate and lay down a working hypothesis which, at least on paper, would seem to account for them. Then, at the convenience of minds better equipped along laboratory lines, it would be in order to test the hypothesis out, whether to prove or to disprove. I think that it is bad philosophy to refrain, on the very inadequate grounds of timidity, from what is confessedly a purely speculative notion. If ultimately proved correct, nothing could be better. If proved incorrect, its very error may cast light that may lead to truth.

There is such a condition which, for want of a better term, we call intestinal toxemia. Precisely what it is nobody knows. But it would seem about time that the medical profession made some provisional attempt to define it instead of leaving it in the hands of quacks and "nature food" faddists where it is at present.

The symptoms of intestinal toxemia, this stepchild of modern medicine, are many and varied. They include coated tongue, bad breath, flatulence, indigestion, constipation, indefinable abdominal discomforts, nervousness, depression, generalized muscular aches and pains. A still more confusing factor is the frequently associated element of the psychoneurosis, which doubtless is an independent problem *sui generis*. Unfortunately, this last is the tag frequently attached to these uncomfortable people, whether their trouble be physical or psychogenic, and they are dismissed with a more or less cynical shrug to join the ranks of the cultists. With the psychoneurosis this paper has nothing to do. It deals entirely with the pure case of intestinal toxemia.

My entire impression of intestinal toxemia is based upon clinical observation. There is not the slightest bit of significant laboratory data.

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The first observation, which gradually and painfully dawned upon me about ten years ago, was the purely negative one that the conventional lacto-vegetarian diet did absolutely no good. This was the usual diet at the time and to a large extent still is. This form of dietetic treatment was aided and abetted by the then current belief in the significance of indican. As indican can be derived only from protein, it was assumed, and with an extreme lack of critical sense, that its presence meant the indubitable putrefaction of protein, which must be straightway interdicted. I am convinced that this delusion was reinforced by a curious age-long prejudice against protein in general and against meat in particular, a prejudice which has no scientific backing but which, rather, carries with it the earmarks of a semi-mystical tribal taboo. A curious refinement of this taboo is the strict prohibition of red meat and the grudging allowance, as a special and unwilling indulgence, of meager portions of white meat, as if there were the slightest significant chemical difference between the two.

About this time I became acquainted with some unpublished observations of Johnston, at one time dermatologist at Cornell. He remarked the very frequent occurrence of a pallid streak on the vermilion of the upper lip in cases of acne and eczema. Testing the stools of two thousand of these cases he found a fermentative flora invariably coincident with this white line and suggested that it might be an indication of a fermentative toxemia. This line was present in all of the cases with which I was having such ill success with the lacto-vegetarian diet, plus roughage, agar, etc. Very gingerly I decided to put this conception to the test and also decided that if it were worth trying at all it was worth trying well. Accordingly these cases were put on a minimum of carbohydrate, with a complete absence of fruit and roughage, and a maximum of protein, chiefly meat. Milk was forbidden partly because of its indefinable nature and partly because of a beginning suspicion that perhaps patients were telling the truth when they said that it disagreed with them.

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The result was that the cases got well and they got well promptly. They have been getting well ever since. They stay well as long as they avoid an undue amount of carbohydrate. They get uncomfortable again when they take an undue amount of carbohydrate. It is to be understood, of course, that organic diseases, particularly focal infection and chronic cholecystitis, were either ruled out in the study of the individual case, or, if found, treated appropriately. They are not included in this discussion. Involved psychoneurotics failed to get well. Psychoneurotics of lesser degree were helped to a certain extent but were never completely cured. Although the psychoneurosis is not germane to the subject at hand, except through its frequent coincidental presence, I am convinced that it plays a profound rôle in intestinal symptomatology and must be differentiated from intestinal toxemias of purely dietetic origin. Perhaps in some more understanding day these unfortunates will be accepted as sick people and not as quasi-criminals.

A result of striking frequence was the cure of constipation, and this in the face of the absence of the roughage which earnest but misguided prophets have been forcing down our throats. While in the throes of this transition from the respectable lacto-vegetarian point of view, I made a curious observation. A patient came in with symptoms that could be explained by carbohydrate fermentation. With the exception of the white line described by Johnston and a coated, indentated tongue, the physical examination was negative. I prescribed a high protein, low carbohydrate diet. After she left the office the urine was put through the usual routine and found to be loaded with indican. I told myself that I had made a mistake, that when the patient returned I would have to eat my words. She came back a week later feeling considerably better. Remarkable to relate, the indican had completely disappeared and this in spite of the fact that she was eating a relatively and absolutely greater amount of indican-pro-

ducing food. Fortunately, I was sufficiently sophisticated in the Art of Medicine to refrain from telling her that I had made a mistake until I analyzed the urine for the second time. And then I didn't tell her. Apparently I had been right without knowing it, and I decided that the symptomatic improvement of a patient was a fact of far greater significance than any of the absurdities that we perpetrate in test-tubes, to say nothing of saving my own face. After that a number of similar cases turned up until I finally discarded indicanuria as a matter of no moment. How to explain it I haven't the slightest idea. Perhaps the intestinal wall is normally impermeable to substances like indican and is rendered permeable by the presence of a carbohydrate fermentation. Perhaps indican can only be produced by the symbiosis of fermentative with putrefactive bacteria. Perhaps—and this seems most likely—the presence of a fermentation allows in some way or other the passage of undigested and unabsorbed protein to the lower reaches of the colon where putrefaction might take place. At any rate, I record it as a fact which it is up to more scientifically-minded men to elucidate.

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The following are the reports of three characteristic cases which recovered promptly on a low carbohydrate, high protein diet. Part of what makes them characteristic resides in the way in which they differ symptomatically. Only the positive data are given. In each case a searching history, a complete physical examination, a urinalysis and a complete blood-count were done.

Case I. F. E. B. Male, age 44. Since childhood has suffered from recurrent attacks of epigastric pain. The pain is a steady burning at first, then becoming cramp-like, with excessive formation of gas, then bowel movement and relief. The pain tends to be more frequent in the spring and summer and there may be several months of freedom from it. It comes on three to four hours after eating and is relieved by the passage of gas and by the next meal. A typical daily menu of the patient was as follows: *Breakfast*—cereal with milk and sugar, rolls and butter, glass of milk; *Luncheon*—vegetables, salad and fruit; *Dinner*—meat, two vegetables, salad, fruit, bread and butter. A surgeon, without even making a physical examination or doing a Graham test, diagnosed chronic cholecystitis and advised operation. My own examination of the patient was negative except for a pale streak on the vermilion of the upper lip, and a coated tongue indentated along the margins by the teeth. On a low carbohydrate, high protein diet, the pain cleared up in four days and he has been free from it up to the date of writing, a period of about three months. Incidentally he feels much more energetic. No other treatment besides the diet was given except a few enemas.

Case II. J. I. Male, age 36. For years has suffered from "indigestion," manifested by gas, nausea, vomiting, sour eructations and epigastric distress. Chronic constipation was present. A gastroenterologist made a diagnosis of duodenal ulcer on the basis of fluoroscopy but x-ray films showed this diagnosis to be incorrect. His average daily menu was as follows: *Breakfast*—cereal, bran, milk and sugar; *Luncheon*—vegetables, occasionally fish; *Dinner*—meat and vegetables, bread in excess and potatoes. Physical examination was negative except for the pallid streak on the upper lip, a coated indentated tongue and a slight enlargement of the liver. On a low carbohydrate, high protein diet his symptoms began to clear up promptly and in three weeks' time he was entirely free from them. Incidentally a chronic nasal catarrh practically disappeared. I have seen this happen a number of times.

Case III. D. A. S. Male, age 40. Constipated and dependent on enemata all his life. Since age of nineteen has suffered from incapacitating temporal headaches, either right- or left-sided. The headaches recur about every ten days and are frequently associated with vomiting. There is photophobia, but no half-vision or scintillating scotomata. Relieved by rest, darkness and hot towels. His daily menu was as follows: *Breakfast*—bananas, cream, prunes, cereal; *Luncheon*—vegetable soup, coffee, cake; *Dinner*—regular dinner with dessert. Eats starch to excess. Physical examinations showed white streak on upper lip, a coated indentated tongue, two non-vital teeth and atrophic tonsils with fluid peritonsillar pus. The physical examination was otherwise negative. On a low carbohydrate, high protein diet his symptoms cleared up promptly. He has been entirely free from migraine, incapacitating attacks of which had recurred regularly every ten days to two weeks.

The above are three typical cases and they have been duplicated a number of times. A curious thing was a short series of apparently healthy young adults who had consulted me because of albuminuria discovered in the course of life insurance examinations. They all had a carbohydrate fermentation. They all had negative physical examinations and normal blood chemistry, and in each case the albumin cleared up completely on a low carbohydrate, high protein diet.

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It is here that speculation comes in as to why these things happen, and I have laid down the following extremely simple working hypothesis as a plausible explanation. One of the most frequent concomitants of carbohydrate fermentation is gas and about 40-50% of intestinal gas is methane. Methane, or marsh-gas, can only be produced in the body by the bacterial breakdown of carbohydrate. Furthermore, if the simple, almost elemental, methane is present as an end-product of fermentation, it is not unreasonable to assume that intermediate, more complex and, incidentally, more toxic products are present too. We know that oxalic acid and butyric acid can be produced in the laboratory by the fermentation of carbohydrate with an appropriate organism, and these two types of fermentation have been demonstrated in the intestine. A long list of theoretically possible products of carbohydrate fermentation is known, many of them toxic. Among them are the higher alcohols which make up the so-called fusel oil of inferior whiskey and which have such capacity for producing misery. It may not be a coincidence at all that the symptoms of a "hang-over" are qualitatively so similar to the symptoms of intestinal toxemia. It may be that both are due to the same or analogous products of carbohydrate fermentation, and it is to search for such products in the intestinal contents that I consider a program of research highly appropriate.

I conceive of intestinal toxemia as a condition not caused by bacteria at all, at least not in the sense that diphtheria is caused by the diphtheria bacillus in elaborating a specific toxin. I conceive of intestinal toxemia as a comparatively simple chemical intoxication directly caused by various breakdown products of carbohydrate fermentation. This fermentation is of course bacterial,

(Concluded on page 44)

The Humped Nose: Its Cosmetic and Plastic Correction

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A MISSHAPEN or imperfectly formed nose is the first thing noticed about a person, because it is the most conspicuous feature of the face. It is also true that our first impressions, favorable or otherwise, are influenced by the nose, because it dominates every other detail of the countenance. The length and the height of the nose determine the length and profile of the middle third of the face. If the nose is long and hook-shaped, the measurements of the face are thrown out of proportion and the entire physiognomy is distorted. The chin which, with a normally shaped nose, would be considered firm and characteristic of a pleasing personality and a firm will, would appear weak and receding when placed below a hooked nose. Normally shaped lips beneath a badly hooked nose may appear thick and negroid.

Before and After Operation—Nasal Reconstruction—After the straightening process, the nose was shortened slightly more than three-fourths of an inch.

When this type of nasal deformity is great enough to cause serious social and professional embarrassment, its potency as a cause of unhappiness cannot be questioned. Such a handicap may contribute to an inferiority complex, which, over an entire life's span, is capable of destroying the productiveness of the victim.

The humped nose, which has served to characterize the Semitic races and which is commonly found among certain of the Latins, is one of the most frequent of cosmetic deformities; but fortunately it very readily succumbs to the scalpel of the plastic surgeon.

Many of the cases of this type are purely cosmetic; that is, a normal shape and contour are the surgical results sought. In this kind of case a desire for a more acceptable personal appearance may be the incentive for seeking the surgeon's assistance. However, a majority of these cases are plastico-cosmetic; that is, a functional result is as much the desire of the patient and the aim of the surgeon as is cosmetic improvement. In these cases, whatever the motive underlying them, impaired breathing is almost invariably present. Among the cases examined or operated upon by the writer, either the hump or breathing difficulty may be said to have been caused by one or more of the following conditions:

1. Deviation of the septum, which may be the result of trauma or heredity.
2. Septal spurs.
3. Areas of thinness in the septum, which are occasionally found between the tip of the septum and its articulation to the superior maxilla, and which permit the septum to curve to one side and form a false spur which may almost occlude one nostril. The curve will momentarily disappear when the septum is pinched between two fingers.
4. Fracture of the tip of the septum, which turns nearly perpendicular to the other portion and partially or almost completely occludes one or both nostrils.
5. Long, narrow nostrils partially occluded by the thin collapsible alae adhering to the septum during inspiration.
6. Fractures or displacements of the bony structure, usually associated with a deviation of the septum.

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Before operating, the surgeon should be sure there is no active pathology in the nasopharynx or its neighboring structures; he should know that the heart action, blood pressure, and coagulation time of the blood are

normal. Furthermore, the extent of all previous nasal operations should be well established. In addition, it is well to know something of the resistance and healing ability of the patient. But most important of all to the plastic surgeon is the elimination of the possibility of syphilis by laboratory means.

A grain of codeine sulphate and five grains of aspirin, in combination, given an hour before the operation, constitute an ideal sedative and anodyne for the nervous patient, if the operator is experienced. Many times the writer has had patients go to sleep during the operation. If the operator is inexperienced, a quarter of a grain of morphine sulphate will be found more desirable. However, the use of morphine and its salts should be discouraged, because, after the operation, patients who have had the preliminary hyperdermic injection of this drug are weak and dizzy. This undesirable effect does not follow if codeine and aspirin are given. The period of hospitalization varies from 24 to 72 hours. However, among vigorous patients, there are many who refuse to be hospitalized.

Before and After Operation—Nasal Reconstruction—A long nose makes the chin appear weak and receding. The good facial balance is very noticeable after the reconstructive process.

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The operation, except in rare instances, is performed under local anesthesia, and with care even the pain from the first prick of the needle can be eliminated. The patient's face is cleansed with alcohol, and iodine is applied over the nose and upper lip. A ten per cent solution of cocoaine is used to anesthetize the nasal mucosa; a 1:1000 solution of adrenalin is applied to supplement the cocainization and to minimize the bleeding. Then the entire intranasal field of operation is iodinized. The iodine is immediately neutralized by a liberal application of alcohol. A two per cent solution of novocaine containing adrenalin is used for infiltration, which begins at the base of the columna nasi and passes outward to the tip and upward along the top of the septum and bilaterally over the bony structure of the nose. The scalpel is passed up through the nostril, and an incision is made laterally over both the nasal processes and downward along the top of the cartilaginous septum. The entire incision is made inside the nose; the skin is not cut at any point. The tissue over the bridge of the nose is loosened, and before the nasal bone is removed, the periosteum is pushed back and saved. The excess of bone is removed by sawing, and the nasal processes are leveled by paring with a rasp. The septum is trimmed and leveled with a cartilage knife and shortened, usually by the removal of a V-shaped section from the tip or center, according to the structure and position of the cartilage. Two or three large silk sutures are passed through the septum and the adjoining tissues for the purpose of closing the gaping space. If the sutures are properly placed, very little dressing is necessary to conceal all evidence of the operation.

After the first twenty-four hours the dressing consists of adhesive strips. It is used chiefly to prevent public inspection and criticism until the swelling disappears. For the first few days, patients are very solicitous concerning the length of the nose, since, because of the swelling, it appears entirely too short. As the swelling recedes, the tip of the nose drops to normal and the patient's anxiety is relieved. Peroxide of hydrogen may be used for cleansing and keeping the nostrils open. The sutures are removed on the eighth to eleventh day, according to the healing ability of the patient.

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During the operative process, the tissue is loosened over the bridge of the nose to let the skin contract and thus return to its original firmness over its diminished contents without puckering. The periosteum over the nasal bone is saved and pulled downward over the leveled processes, because the bone regenerates beneath it to form a straight bridge almost as strong and thick as the previous one

In removing the bone, some surgeons prefer a chisel and others a saw. The writer has always considered the nasal processes too fragile for the use of a chisel,

and besides, the saw is under much better control and the patient does not suffer from the shock of the blows, which may prove very unpleasant in the case of nervous patients.

More than a thousand such operations and twelve years of experience as a plastic surgeon have convinced the writer that infection in this type of cases is extremely rare and of low grade. A scarcity of sutures in these cases establishes an almost perfect drainage. It is next to impossible for extensive bleeding to occur, for pressure upon the nostrils suffices to control any unnecessary oozing.

This operation presents many difficulties to men just beginning to specialize in plastic surgery; missteps in operative technique confront the operator on all sides. Failure of the surgeon to recognize one of these errors of technique may cause the patient to go to a more experienced man in order to secure a more finished result. Following are the most frequent missteps that necessitate secondary surgical interference:

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1. Faulty introduction of sutures.
2. Poor arrangement of the overlapping cartilages.
3. Removal of the periosteum with the nasal bone. The resulting nasal bridge is not perfectly smooth and straight.
4. Removal of the V-shaped section of the cartilage before the leveling of the septum. In such circumstances, a slight crook persists in the tip of the nose.
5. Failure to remove enough cartilage. In this case the nose is not sufficiently shortened. The patient may embarrass the surgeon by telling him that the hump is gone, but that he neglected to make the nose shorter. It is almost impossible to make the nose too short unless, without one's knowledge, a syphilitic process lends its unsolicited assistance.

In conclusion, it is the writer's desire to emphasize the fact that this is a minor operaton, and, furthermore, that it does not replace the more serious and more extensive submucous resection. In fact, the cosmetic process in this type of cases is frequently only a preliminary step to the establishment of a more perfect result by submucous resection. If both of the operations are indicated, the cosmetic should have the precedence over the other one, because a correctly shaped framework will permit a more complete resection and at the same time increase the remoteness of a possible structural collapse.

Lastly, the results are exceedingly striking, cosmetically. The breathing is always improved; in fact, the shortening of the nasal passages is probably as instrumental in the functional improvement as the correction of the internal deformities. Sixty-eight out of every hundred of these patients are men.

Intestinal Toxemia

(Concluded from page 41)

but the bacteria are merely indirect agents and it may turn out that what particular flora is involved does not matter very much, the significant source of trouble being carbohydrate which has reached the lower intestine without being absorbed and there subjected to fermentation. It may turn out that instead of constipation causing intestinal toxemia, it is the intestinal toxemia that causes constipation, the spastic sigmoid being rendered so by irritation from within, mechanically by unabsorbed roughage, chemically by products of fermentation. In order to investigate the supposititious and theoretically deducible products of such fermentation and, if present, to attempt to correlate them with particular symptoms, I feel that a new field of research is definitely needed.

Addendum

The following is the diet that was prescribed in each case:

Forbidden: 1. Sugar and all food or drink containing it. No sugar in tea or coffee. No desserts of any kind. No sweet drinks.

2. Flour and all food containing it except one average slice of bread with each meal. No pie, cake, pastry, puddings, spaghetti, macaroni, or soups and gravies thickened with flour.

3. Cereals both raw and cooked. Potatoes.

4. Fruit, both raw and cooked, and fruit juice.

5. Nuts.

6. Salads and raw vegetables. Baked beans.

7. Bran, psyllium, agar or any other kind of roughage.

8. Spinach, corn, cauliflower, broccoli, mushrooms, cabbage.

9. Root vegetables, such as beets, carrots, turnips and parsnips.

10. Milk, except in tea or coffee.

11. Fresh pork and fresh ham. Small amounts of bacon and fried ham are allowed.

Allowed freely: Meat, fish and eggs, a generous portion of any one of these three with each meal. It may be of some advantage to take eggs for only three or four breakfasts each week. On the other mornings take liver and bacon, chops, chopped meat, broiled mackerel or kippered herring, or kidneys. The best meats are beef and lamb. Fowl can be taken as desired. It is not enough to cut out the forbidden foods. These allowed foods must be freely taken.

Allowed in moderation: One slice of bread and butter with each meal. With luncheon and dinner one average helping of one of the tender cooked vegetables, such as fresh or canned peas, string beans, stewed tomatoes, asparagus or eggplant. It is not necessary to take a vegetable with luncheon. Thin soup or creamed tomato soup occasionally. Occasionally a small portion of cheese such as Roquefort, Camembert or cream. Do not eat the tough, rubbery cheeses. A moderate amount of potato may be taken if the bread is omitted at that meal. Oysters, clams and lobsters may be taken occasionally unless they are known to disagree.

123 East 53rd Street.

How to Reduce by Eating

(Concluded from page 39)

The patient must choose between sanely gratifying the taste or keeping and further accumulating fat.

The exercises are simple and easily taken. In the office, in the church, in the theatre, on the streets, anywhere.

To succeed become thoroughly converted to the idea. "Carry on."

Go slowly, *festina lente.*

Eat slowly, eat less and grind up the food.

Look for an old tooth instead of an old gonorrhea in many cases of prostatitis.

Cultural Medicine

The Medical Library in Relation to Medical Culture

With Especial Reference to the Library of the Medical Society of the County of Kings and its Emeritus Directing Librarian, William Browning

By James P. Warbasse, M. D.
Brooklyn, New York

THE first medical records were written on the tablets of the memory of ancient physicians. With the death of each, a library perished. When graphic art first appeared in India, more than 6,000 years ago, among the earliest facts it recorded were those of medicine. The Sanskrit of the ancient Hindus, a language of great beauty, richness and inflection, and properly called the mother of European tongues, preserved the earliest records of healing. The Ayur Veda, the first medical document in this language, recites the earliest story of disease.

In Egypt, the tombs of the dead once served in the stead of medical libraries. Here were filed away and preserved the records of disease in the well embalmed bodies of an ancient people. This voluminous material is now taken out and read to us. The archeologists are the archivists who perform this service. The nature of fractures and diseases of bones was then much as it is today. Here we read of pleurisy, arteriosclerosis, appendicitis, and nephritis. Paleopathology examines these ancient archives and translates to us the story of bacteria in the bodies of Egyptians 5,000 years ago. Written works were also left by these people in the form of papyri, now accumulated in the great libraries of the world.

The Chinese, the Hindus, the Egyptians, the Persians, and the Mesopotamians accumulated their written records of medicine and preserved them in well organized libraries, when our European ancestors, clothed in the skins of animals, lived in caves, with little conception of a graphic art, save the marks of their teeth upon the bones they gnawed.

When Alexander became Alexander the Great and built Alexandria, in 331 B.C., he was inspired by his teacher, the naturalist, Aristotle, to found the great library in that city. Aristotle promoted medicine. His pupils, Theophrastus, the physician and botanist, and Menon, the physician and medical historian, contributed to the creation of that great collection of learning. About this library developed the Medical School of Alexandria, with its clinics, laboratory, and museum. It was natural that in the presence of 700,000 volumes (or rolls of manuscript), in all available languages, a culture should develop. While these volumes were the product of a diversified medical scholarship, they in turn promoted a concentrated medical scholarship in Alexandria which was the finest the world had seen. Here developed the best learning of the time. Here studied the geographers, Ptolemy and Strabo; the mathematicians, Euclid and Heron; the physicist Archimedes; and many men of medicine, including Dioscorides, Soranus, and Galen. The shining medical lights of the Alexandrian school were Herophilus and Erasistratus. The culture that developed about these men is inconceivable except in the presence of a great library. Had there been no such library, the culture of Alexandria would have created one.

The library of Alexandria was burned as an expression of religious fanaticism; and thus passed as a result of ignorance and superstition a great collection of learning, enormously rich in its capacity to combat ignorance and superstition. The destruction of books with which one disagrees is an act of vandalism inspired by intellectual cowardice. It has been seen in all ages; and today, as always, it marks the decay of the culture of those who perpetrate the destruction. Voltaire expressed a pertinent sentiment when he exclaimed, "Although I am in disagreement with everything you say, I will defend with my life your right to say it." Such an attitude would save libraries as well as lives; but it has never been a prevalent attitude.

On the other hand, there was Philippus Aureolus Theophrastus Bombastus von Hohenheim, in 1526 appointed professor at Basel, who opened his course of lectures by publicly burning the works of Galen and Avicenna to show his contempt for his predecessors. I am sure that in our eyes this gesture of superiority failed; nor did he add to his glory by exclaiming that medicine should now begin anew and follow him. This is bombastic medicine in action. It may have served to entertain, but the fire of books kindled by Paracelsus failed to illuminate anything but his own pretenses.

Fine libraries were created by the Saracens in Bagdad, Judeshapur, and Cordova, where the Greek classics were preserved when they were driven out of Christendom. Had it not been for these libraries much more of Hippocrates and Aristotle would have been lost to the world. These were the days when the Caliphs paid a translator for his translation of Galen's works, from the Greek into Arabic, an amount of gold equal to the weight of the manuscript; and it was natural that the translator did his work on good stout parchment.

At the beginning of the Christian Era, many of the writings of the ancients were preserved in the monasteries, and out of these collections of classics libraries

Address before the Medical Society of the County of Kings, Brooklyn, New York, Nov. 21, 1933.

grew. In the medical school of Salerno, established in the Eighth Century, were nurtured the best ideals in medicine that had come down from Greeks, Romans, Saracens, and Jews. Here developed a great library; and from here emanated a medical book, the *Regimen Sanitatis Salernitanum,* which influenced medical thought and practice for a thousand years.

From this time on the universities sprang up and served as the centers around which libraries grew. Then came printing, and the making of books entered its mechanical age. The first medical text printed was the Gutenberg *Laxierkalender* in 1457. The three pamphlets on self-abuse, by Johanne Gerson, printed in 1467 by Ulric Zell, in Cologne, were perhaps the next. Then followed more sizable works. A number of books on the pest were among the early printings. In 1470 was printed the *Medicinis Simplicibus* of Giacomo de Dondi. De Chauliac's *Chirurgia Magna,* written in 1363 and published in 1478, was the earliest work on surgery printed. The first complete edition of Hippocrates, the *Opera Omnia,* appeared in Latin in 1525. Other early medical books printed were those of Albanus, Albertus, Berengarius, Galen, Celsus, Rhazes, and Avicenna.

These are some of the incunabula of medicine. Many of these books, printed before Columbus discovered America, here in our medical libraries, we may hold in our hands—and it should be with reverent respect, not only for the authors and translators, but for the artisans who made the paper and the ink, and for the printers and binders, who produced books into which the tooth of time has bitten in vain. These books, with their firm paper, their clear black letters, and, indeed, their wisdom, silently deny the contumely that has been cast upon the ages out of which they came. They are not the voice of a benighted people. Backwardness does not speak a language such as this. These volumes were created before the prevalent economic system, before the genius of the world was bribed by the urge for profits to find ways to make things that are tawdry to look as though they were good. These ancient books stand, stalwart and staunch, in the libraries of the world, where man's greatest treasures are preserved, while in their company slump the bedraggled products of more learned times. These incunabula are the cradles in which medical learning was nurtured and protected in its tender beginning. And fortunate is our profession that in those difficult days there were artisans, artists, authors, and publishers, who found joy in good and honest work. These books bear upon their every page the imprimatur of culture.

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We often hear as the criticism of a library that "It has a lot of old stuff," or the word "antiquated" applied to its material. A medical book passes through five stages on its way to oblivion. The first is its period of current usefulness and opportunity. This lasts from three to five years. Then it passes into a reference period of ten years, when it is turned to for its fundamental facts which do not change. The third period lasts a hundred years, during which it is an old book, but not an antiquity. It is still used occasionally by the scholar who refers to it and finds the thing that his contemporary reports as new. In this period it is held most cheaply and passes from dealer to dealer with an ever declining esteem. Then, if it has not perished, it enters its apotheosis, and becomes an antiquity. This is the fourth period, the period of expanding glory. Its only safety now is in a permanent library. Its value increases with the years. Time enough has elapsed to have seen the ideas and methods that superseded such a book become dominant and then fade away; and now men turn to it and declare, "How wise those old fellows were!" It is preserved as an antiquity in the great libraries. In time, its physical decay begins to tell. Then, if its merit justify, it enters the fifth period and is reprinted and thus preserved indefinitely for library use. It is not conceivable that the works of Hippocrates will ever be permitted to perish so long as medicine endures. The *Gold Headed Cane,* by William Macmichael, has enjoyed six editions since its first publication. The medical profession prizes and protects the volumes that are significant.

Every wise physician is aware of the value of knowledge of the literature of his art. The errors due to the neglect of this knowledge have written some of the sad pages in medical history. For example, the Medical Faculty of Paris, in 1742, declared the reconstruction of the nose with tissue from some other part of the body to be impossible. The procedure fell into disuse. Later many attempts to perform the operation were made, and learned treatises were written. This was all in ignorance of the fact that Tagliacozzi, the Italian surgeon, had successfully performed many rhinoplasties and published a well-illustrated book on the subject in 1597—one hundred and fifty years before. Failure to make use of the library brought discredit to an entire medical faculty. Joseph P. O'Dwyer confessed that he lost four precious years in perfecting intubation of the larynx because he had not known of the work of Eugene Bouchut, done thirty years before. O'Dwyer was too busy inventing intubation to spend the few hours in the library that would have revealed to him that he was doing over again what had already been done. Without knowing that they were making no new discoveries, many of the moderns have invented vaginal and rectal speculums that are precise duplicates of those in use two thousand years ago. These are the so-called practical men who scorn the people whom they call bookish.

Albrecht von Haller, born in 1708, was the medical prodigy of his time. In Göttingen, his experiments in physiology were so rapid and unique that nobody was able to keep up even with a knowledge of his results. He wrote some 13,000 scientific papers in seventeen years, and every one contained something new. Sir Michael Foster said, "When we open the pages of Haller's *Elementa* we feel that we have passed into modern times." So numerous were his discoveries in physiology that, it is said, many of them are again being reported as new by recent research workers.

There seems to be such a thing as the fear of books. This bibliophobia has gotten medical men into much trouble. It has made many say things that were said better by the ancients, and many of its victims have invented devices already on exhibition among the excavations of the archeologists.

But there exists among our profession also a true bibliophilia. This is expressed in the existence of some two hundred medical libraries in the United States. There are about half this number in Europe. These American libraries have drawn much inspiration from the Library of the Surgeon General's Office, in Washington, and from that great creator of libraries, John S. Billings. Many of these collections are owned and used by active medical societies. Such are the libraries of the New York Academy of Medicine and of the Kings County Medical Society.

The best thing that can be done with a library is to use it. The best place for a medical library is in the

midst of medical practice, where things are being done. That means within easy contact with the practicing physician. The next desideratum is that it be connected with the social side of medicine, where meetings are held and the problems of practice discussed. If such a library can be united also with a teaching institution for the training of doctors and with a hospital system, a combination is effected which gives a coordination of all of the medical interests of a community and allows each to contribute its advantage to the others. A medical library must have many contacts with medical needs in order to fulfill its largest possibilities.

There is a deep appreciation of the library in the heart of the medical profession. And there is also a deep esteem of the men who make use of its facilities. In the case of two men of equal qualities, if one is known for his fondness of medical literature and for his habitual use of the medical library, he of the two will enjoy the greater esteem of his profession. And when his profession expresses itself by some preferment, he of the two will receive the greater support. Men, who themselves make little use of books, habitually show their appreciation of those who do. There is something inherent in us that makes for approval of those who are fond of these tokens of medical culture.

This is one of the fine qualities of our profession. It is another evidence that the intellectual expansion that comes from familiarity with our literature is not only a cultural asset but possesses what may be called expedient value as well. The doctor who knows and uses his literature gets along best. The medical library, the repository of the wisdom of all time, serves the individual doctor to broaden the understanding of his problems, to raise himself to a vantage point from which more can be seen, and to give him added joys and satisfactions in his profession. If we think in pragmatic terms, it pays to be a bibliophile.

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This Library of the Kings County Society is a fine index of the quality of our profession and of its capacity for development. It has suffered the vicissitudes of a profession experimentally making its way. In its early history, among its custodians, it had the misfortune to have one librarian who exemplified the so-called practical attitude. He regarded the best half of the library as out-of-date and antiquated stuff, and sold it to a second-hand dealer. When the Library was precariously housed and inadequately organized, its expansion was restrained. Then a significant event occurred in 1891—William Browning became its librarian. This period marked the beginning of growth. Browning found it with 3,882 volumes. At the end of his first decade as Librarian, it had grown to 30,000 volumes. Then a fire-proof building was erected for its housing. Browning's intimate medical friend, George McNaughton, was the most active person in the acquisition of this building. In the next ten years the Library grew to 75,000 volumes. In 1926, it had 107,000 volumes. And now it is a collection of 130,000 books.

Browning was Librarian from 1891 till 1900; Directing Librarian from 1917 until 1926; and Emeritus Directing Librarian from that date until the present time. But while there have been many Librarians and Directing Librarians, for a period now of some forty-three years, this Library has been under the watchful care of William Browning, whose vigilance has never relaxed during all that time. It has been he who carried on his shoulders the responsibility for its growth and protection. So patent a fact is this that I am not sure but that the William Browning Library would be a more appropriate name than the designation it bears. To him more than to any other person, this community is indebted for the excellence of this collection of medical literature.

It was he who sensed the importance of completed files, of connections with other libraries, of acquiring the valuable things in literature, and the need of adequate housing. His sagacity seized the opportunities that made this library great. He was one of the founders and in 1898 the first treasurer of the Association of Medical Librarians—now the Medical Library Association, which has contributed so much to creating mutual assistance among the medical libraries of this country.

A great library such as this is never an accident. It is the product of planning and work. Browning has done all of these. His vision saw that a library to become a great institution must at least possess three guarantees. (1) It must be housed in a fire-proof building. (2) It must be under guard with adequate supervision for its protection. (3) It must have a management that is competent and consecutive and which provides continuity of plan and method. These are essential to prevent a library from falling into the hands of some incompetent product of the democratic theory. Browning has seen to all of this. No one individual, nor the aggregate of this society, can ever know the extent of the services this one man has performed. He alone knows; and he is that one who will never tell.

It is because of the guarantees of safety and perpetuation which he has thrown about this priceless collection of literature, that a discerning philanthropy may be expected in time to provide the necessary financial resources to erect the additions to this building that shall make possible the continuation of the expansion of this great foundation, now so well begun. It is an opportunity awaiting the vision of a wise benefactor.

Here is reflected the quality of our craft. This library typifies the best that is in medicine. It is an index of our capacity for cultural development.

On this occasion, I am honored by the privilege of paying tribute to my friend, William Browning, who made our library not only large and complete in many of its aspects, but who made it useful and used. His genius made it splendid.

It is precious to us, not only because of its value in our service, but because it stands as a memorial to him who is giving so much of his life to make it worthy of the best traditions of his profession.

Hyperinsulinism, A Definite Disease Entity: Etiology, Pathology, Symptoms, Diagnosis, Prognosis and Treatment of Spontaneous Insulogenic Hypoglycemia (Hyperinsulinism)

SEALE HARRIS, Birmingham, Ala. (*Journal A. M. A.*, Dec. 16, 1933), gives the definition and frequency of hyperinsulinism and states that hunger is the most constant symptom. At least a hundred cases have been reported by American and European clinicians, surgeons and pathologists who have made thorough studies of all phases of hypoglycemia due to the hypersecretion of the islet cells of the pancreas. Sufficient data have accumulated in medical literature to warrant the discussion of hyperinsulinism as a definite disease entity. The author endeavors to outline the etiology, pathology, symptoms, diagnosis and treatment of hyperinsulinism as derived from published reports of many cases and from a study of the disease over a period of ten years.

The Influences That Have Molded a Great Medical Library

WILLIAM BROWNING, M.D.
Brooklyn, N. Y.

I

Thomas B. Downing, M.D., Pioneer of the Library of the Medical Society of the County of Kings

It is a great pleasure to see the fine turnout this evening to greet the two distinguished speakers, each of whom, by the way, has been a Directing Librarian.

Of course, I stand here as the representative, for the moment, of the many noble workers and contributors who have made the development of the Library possible. About one of these, concerned with the inception of the Library, a story has come out this summer, that if told aright, you would find interesting, even pathetic.

You may recall the historic fact that in 1844 Dr. Bradley Parker, then President of the Society, in an address, put forth a clean-cut, fine proposition for the development of a medical library by this Society. And with the aid of co-workers in a couple of years a very creditable start was made. Now, in connection with any movement of importance, the question often arises as to its sources or background. There was no general medical library boom in the country to suggest it; in fact, there were only two that are still active public medical libraries, Philadelphia and Baltimore.

Nor, though I have been in touch with this Library for now fifty years, has any whisper of tradition come down from that period. This silence is accounted for by the long period of quiescence until Dr. William W. Reese in 1869 started the modern development of the Library. It seems that it is only by going back to past records that any clue can be obtained.

This spring Mr. Frankenberger and I, quite without knowledge of the present meeting, were hunting in the Library for any works of that early period, that might still be here. And we came across a little pile of ten pamphlets, paper issues, annual transactions of the Medical Society of the State of New York, scattered along from 1808 to 1826. And across the top of each was written in a bold hand "Medical Society of Kings County." On some of these the name of the donor was also noted. This name was unknown to any of us, and almost certainly not to any of you. A search soon showed that there had been such a man, and that he had been a member of this Society. But little more was found regarding him, his name last appearing on a list of members issued in 1858, just seventy-five years ago, and there he is starred—dead. But by recourse to our old minutes, to various libraries, and even to the surrogate's office (though he left no estate), it has been possible to piece together a sufficient story for present purposes as follows:

This donor's name was Thomas B. Downing. There is a short Downing Street near here, but whether named for anyone in his line, I have not learned.

He was born and died in Brooklyn.

He was the son of Coe S. Downing,[1] a merchant of 31 Hicks Street, then near the business center.

He graduated at P. & S. in 1834.

He settled the same year at 179 Fulton Street, near Concord Street, and remained there. It was customary at that time to go immediately into practice, the preceptor to some extent taking the place of an internship.[2]

He was proposed July 14th of that year for membership in this Society. And within a couple of years became active in its work, then more executive than scientific.

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Dr. Downing was sent in 1838 as the Society's one delegate to the State Medical Society. On April 18, 1839, he made a report on his delegateship, with suggestions. This was considered important enough to be referred to a special Committee (Drs. Zabriskie, Marvin and Hurd) and then ordered on file in the archives. Moreover, he had a motion passed directing that the ten pamphlets and his report be bound[3]. If we had that report and Bradley Parker's 1844 address it would be possible to dovetail the facts more exactly.[4]

Downing was next elected a Censor of this Society and by the top vote. In fact, his official relations to the Society indicate that he was a man of ability, and also that he enjoyed the esteem of his fellows.

The last meeting he attended was in October, 1839. And he died November 29th of that year[5], the cause of death, according to the alumni catalogue, being pulmonary tuberculosis (which must have had a precipitate ending).

It is evident that he had taken pains to collect that series of pamphlets, and not for his own use, as they were inscribed to the Society, and presented to it with his report. And that they were to be bound, shows his purpose of starting a collection of medical works. These ten issues can therefore be regarded as the initial germ, the literary corner-stone of our Library.

Evidently it was also a large factor in suggesting to Parker the idea of a medical library, and aided a movement to put the work of the Society on a scientific basis.

We might analyze further and ask how Downing came by his inspiration? Many reasons doubtless, his youth, his observations as a delegate, and then his tuberculosis. For, our fellow-townsman, Dr. Arthur C. Jacobson, and those of his thought have gathered a mass of facts showing what a surprising share of the intellectual contributions to the world have come from those who were either themselves tuberculous or of tuberculous stock. And we might even think of him as a martyr to tuberculosis, that we might have the benefit of his incisive vision.

II

Progressive Development of the Library

And now, having told you a story, let me say a word

(Concluded on page 60)

Remarks at the meeting of the Medical Society of the County of Kings held November 21, 1933, in recognition of the services of Dr. Browning in the development of the Library of the Society.

(Editor)

[1] His mother apparently died early, as a Coe S. Downing of Brooklyn, in 1834, married Jerusha Havens of and at Moriches, L. I., who in turn died the next year (old church and social records). Mr. M. B. Downing of Brooklyn says that their old family record was destroyed by fire.

[2] The first interne in Brooklyn was Dr. William Swift in 1845 at the Brooklyn Hospital.

[3] Though it is still unbound, after 96 years. An immediate reason therefore is suggested by the fact that the years 1840 to 1842 are a blank in our old minutes.

[4] These papers may yet be found in a mass of old manuscripts of the Society, as there is no space at present for assorting and filing them.

[5] Notice in the *Long Island Star* of Dec. 2, 1839.

Economics

Department Editor: THOMAS A. McGOLDRICK, M.D.

CHAIRMAN COMMITTEE ON ECONOMICS OF THE MEDICAL SOCIETY OF THE COUNTY OF KINGS, BROOKLYN

A New Deal in Workmen's Compensation

THE title of the Workmen's Compensation Act states fully the intentions of its proponents and expresses the thought of the Legislative body and Executive who enacted it. It was for the physical and financial relief of the workman injured in industry and for his speedy rehabilitation and restoration to duty. The law recognized that the disabilities received by the man were as much a charge on industry as injuries to the animals or machinery therein employed. It was felt that the community should protect and pay for its disabled workmen not only as a matter of justice but even for the selfish economic purpose of not supporting them directly—as hopeless clinic cripples. It was a community problem. The employer, through whom the community acted, was in the strict sense not directly affected. The monies expended by him were promptly placed on the products. The insurance carriers, acting as agents for the employers, had no proper standing in the law. With them it was a business—an opportunity for profit. The medical profession, on whom the successful operation of the law depended, took no part in its enactment—did nothing at that time to avert those evils and abuses which subsequently developed. It is surprising, when laws of other states are compared with ours, that the law has been as beneficial as we know it to have been. But certain objectionable practices and increasing abuses ultimately aroused protests from labor, from employer and from doctor and necessitated action by State Executives and Legislatures.

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The *workingman* soon found what it meant to him to have no choice of his physician. He learned that instead of any personal interest in his welfare on the part of his employer, the insurance carrier took control of him, that the doctors engaged by it were, mostly, those who could be engaged for the smallest salaries, and that his treatment corresponded. Frequently, for reasons best known to employers, he was ordered to attend "compensation clinics" and nurses, ex-orderlies and unlicensed doctors participated in his treatment. The workmen found, and this was fully confirmed, that men were obliged to return to work before they were fully recovered, and finally that when questions of permanence of disability or causal relationship developed, the records, the laboratory reports, the witnesses and the doctors were all on the side against them. *Doctors* complained that having given emergency treatment the patient would be "lifted" from them—yes, even from hospitals where especially good care was given. Doctors objected to the inferior quality of care so frequently given by the "contract doctors" of insurance carriers or clinics. They objected to the financial contracts with hospitals whereby some or all of the fees were retained by these institutions or municipalities. They objected to attendance and testifying at official hearings for which they received no remuneration, to the frequent adjournments, and to the delay in payment of bills.

The *employer* found some faults. He asserted that doctors treated cases out of their domain and for which they were not properly qualified, although it was conceded that 95% of the injuries were minor ones; that doctors were dishonest in their bills, in statements of causal relationship and in the prolongation of treatment.

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Recently Governor Lehman appointed a committee of ten physicians to report to him the facts and to suggest remedial legislation. That report has recently been published. It is a recognition of the faults that have existed and a presentation of remedies to overcome those faults. If these remedies are enacted into law the duties and responsibilities of the County Medical Societies will be greatly increased—duties and responsibilities which undoubtedly will be gladly accepted. The Society will have charge of the enrolment of all physicians who wish to do compensation work. It will certify these doctors to the Industrial Commissioner with their qualifications for the work they wish to perform. It will inspect and recommend for license all worthy compensation clinics. It will prepare schedules of fees in accordance with law, and will help arbitrate all disputed fee bills whether or not the doctor is a member of the County Society. Further, it will furnish to the Industrial Commissioner lists of doctors specially qualified in different branches of surgery to give expert opinions. From such lists the referees will select men, when needed, to give them authoritative statements on medical questions in dispute. Finally, it has great powers of disciplining for irregular practices—even recommending to the Industrial Commissioner that a doctor's name be dropped from the roll of those entitled to collect bills through that department. The employer directly responsible for the payment of bills will be kept informed of the progress of his injured employee. He will have the right of access to and examination of the patient. He will know that the doctor treating the patient is qualified and approved by the County Society through the Industrial Commissioner. He will even have the power, under certain circumstances and limitations, of "lifting" a case. He will be spared the "rackets" of unscrupulous compensation clinic managers and, in any instance of a suspected irregularity in a bill, the dispute must be arbitrated.

Within certain limitations the injured workman will have the choice of his physician. He will thus secure that confidential relationship so essential to best medical care and from a doctor who has a personal incentive to obtain the best results. Records and reports will be

(Concluded on page 52)

Dr. McGoldrick is a member of Governor Lehman's Committee. —Ed. Med. Times and L. I. Med. J.

Cancer

Department Edited by JOHN M. SWAN, M.D. (Pennsylvania), F.A.C.P.
EXECUTIVE SECRETARY, NEW YORK STATE COMMITTEE OF THE AMERICAN SOCIETY FOR THE CONTROL OF CANCER
Assisted by CHARLES WILLIAM HENNINGTON, B.S. (Rochester), M.D. (Hopkins), F.A.C.S., *German Literature Editor,* and UMBERT CIMILDORO, A.B. (Cornell), M.D. (Rome), *Italian Literature Editor.*

The Treatment of Cancer of the Rectum

THE treatment of cancer of the rectum, like cancer in all other parts of the body, in order to be successful, depends upon the discovery of the lesion before metastasis has begun and its complete destruction. This may be done by surgery or by irradiation.

(A) *SURGERY*: According to Goldschmidt (38), whose paper is a compilation of the methods of 116 surgeons, there are six types of operation suitable for cases of rectal cancer: 1.—Dorsal methods with or without preceding colostomy and with or without the preservation of the anal sphincter. 2.—Abdominodorsal methods with mobilization of the whole sigmoid and rectum. 3.—Permanent colostomy with dorsal amputation of the rectum. 4.—Permanent colostomy with abdominal resection of the rectum. 5.—The vaginal route in women. 6.—Various individualistic methods.

On the other hand, Cattell (60) divides the surgical approach into four groups or types of operation: 1.—Abdominoperineal resection in one stage (Miles, Hochenegg). 2.—Abdominoperineal resection in two stages (Lahey). 3.—Anterior or abdominal resection in one stage. 4.—Posterior or perineal resection in two stages following a loop colostomy.

The abdominoperineal route of approach is preferred by Jones (11), Mandl and Pacher (39), Hayden (53), Heydemann (23), Cattell (60), and Rankin (8). The abdominal route is preferred by Hartmann (37) in cases in which the growth involves the upper part of the rectum. However, there is no one method of treatment suitable for all cases of rectal cancer. "Every case is an individual problem" (Binkley, 61). Goldschmidt (38) also says that each case presents individual problems and that there is no typical standard. Surgery is preferred by Kuttner (10), who says: "Extirpation is the most effective"; and by Gordon-Watson (42), "when the growth can be removed"; Lockhart-Mummery (43), who says that no surgeon would advise radium alone in the treatment of an operable carcinoma of the rectum; Carter (62), when surgical resection is "possible." Rankin and Bargen (40) emphasize the necessity of cooperative management in the selection of the patient for operation, of the type of operation best suited to the individual, and of the choice of the anesthetic. Dannheisser (48) prefers sacral resection, if possible, with preservation of the sphincter ani, to any other operative procedure. Hayden and Shedden (6) believe that every cancer of the rectum is operable if discovered early enough, and that the period during which it remains operable is longer than in most other cancers. They are of the opinion that radical resection, including colostomy, offers the patient the only chance of cure. Furthermore, they state that surgical diathermy is of use in reducing the bulk of an inoperable growth. Lockhart-Mummery (55) divides his cases into those that are very favorable, in which the growth has not passed beyond the bowel wall; those in which the growth has passed beyond the bowel wall, but in which there is no involvement of the lymphnodes; and those in which the lymphnodes are involved. He describes an operation which can be carried on in almost any patient, even in the presence of intercurrent disease or of advanced age. Binkley (56) employs: 1.—abdominoperineal operation in one or two stages, 2.—perineal resection following colostomy, 3.—irradiation and radical surgery, 4.—irradiation and colostomy. The method should be selected after the study of the patient's condition. Erdman (57) prefers a perineal operation for cases below the rectosigmoid junction and an abdominal operation with colostomy in growths involving the rectosigmoid junction. Rankin (8) lays great stress on the preliminary preparation of the patient. He believes the abdominoperineal route as advocated by Miles is the most satisfactory, but performs the operation in two stages. He would consider those cases inoperable in which the growth is firmly fixed to the abdominal walls or to the adjacent viscera, those in which there is metastasis to the liver, and those in which the disease is of such long standing that any surgical treatment is contraindicated. Wood and Wilkie (58) consider surgery from the viewpoint of the extent of the disease. Their paper is admirably illustrated. They consider the extension of the growth in a manner already referred to under the title of metastasis in this review. They point out that it is a mistake to be deterred from undertaking a radical operation on account of the presence of enlarged lymphnodes. It is an essential part of a radical operation to remove the nodes as far up as the bifurcation of the superior hemorrhoidal artery. Nothing is to be gained by attempts to clean out the lymphnodes from the hollow of the sacrum because of the lymph flow. Some of their most satisfactory results have been obtained in the youngest patients. Denk (36) contributes a paper which deals principally with the treatment of the wound after operation by the sacral route. Mandl (41) is of the opinion that local excision must be extensive and sweeping. Bowing, Fricke and Harper (50) say that carcinoma of the rectum is a surgical problem. Radium and X-rays are valuable surgical adjuncts. The method of treatment should be individualized as much as possible. Improvement in results is to be looked for through cooperation between the surgeon and the radiologist. Goetze (61) describes a route and method of operation. Kelling (52) describes a method of operation particularly applicable to cases complicated by adhesions, hemorrhage, narrow pelvis, and intestinal gangrene. Lahey and Jordan (14) are of the opinion that "one of the soundest principles of

the surgical treatment of carcinomas of the colon is that preliminary enterostomy proximal to the lesion must be employed in all patients with obstruction."

(B) *IRRADIATION:* There is no question but that irradiation will destroy rectal cancer provided it can be applied to all of the diseased tissue in sufficient dose. The problem is to be sure that the rays, whether they originate from radium element, radium emanation or from the X-ray tube, reach the areas in which their action is desired. This problem might, perhaps, be more satisfactorily and quickly solved if the surgeon and the radiologist would cooperate more closely. In Europe the surgeon, in addition to his knowledge of surgical technique, is also a radiologist; and the radiologist, in addition to his special knowledge, is familiar with surgical technique. In the United States, too often, the two men, surgeon and radiologist, work absolutely independently and each one is likely to be suspicious of the other. The answer to this situation is cooperation and mutual understanding.

Hayden and Shedden (6) consider radium and X-rays purely palliative at present. Binkley (12) believes that the best results are obtained by a combination of surgery and irradiation. Irradiation offers the inoperable patient greater palliation without the immediate possibility of a fatality than incomplete removal. Heydemann (23) considers postoperative Röntgen irradiation desirable "at times." In inoperable cases both Röntgen irradiation and radium are valuable. Hartmann (37) says that radium therapy combined with colostomy usually did not give good results. Gordon-Watson (42) says that radium should be used in inoperable and borderline cases but only in conjunction with surgery. He also says that greater alleviation can be obtained in advanced cases. Binkley (43) advises irradiation in inoperable cases and says that this form of treatment gives a great degree of palliation. Bensaude, Cain and Horowitz (46) warn against the indiscriminate use of irradiation on account of the liability to perirectitis and stenosis.

Gordon-Watson and Dukes (47) treated 93 cases of cancer of the rectum between 1925 and 1930. They summarize their experience as follows: 1.—An early growth on the anterior wall of the rectum can be destroyed by needling through the vagina, and the rectum at the site of the growth can be restored to its normal caliber. 2.—A similar result can be secured by the introduction of seeds directly into a small growth without colostomy. 3.—A large, fixed, inoperable growth can be destroyed by perineal irradiation, with a resultant fibrous stricture and the patient remain well (four years). 4.—An inoperable high growth can be apparently cured by abdominal irradiation and remain well (two years). 5.—A fixed inoperable growth can be rendered operable. 6.—A perineal recurrence can be made to disappear. 7.—In the worst and most advanced cases the patient can be made more comfortable by the relief of symptoms. They go on to say: "Until we are in a position to measure the action of radium with some accuracy, to be able to say with confidence that a given dose of radium, administered in a given way, will produce a certain result, we are in duty bound to advise surgery, mutilating though it is, in preference to radium for the operable case." "When, however, as sometimes happens, the growth is operable, but the patient is considered unsuitable for radical surgery on other grounds, we believe radium holds out great though uncertain prospects of cure and should always be employed when available."

Dannheisser (48) treats inoperable patients with colostomy and irradiation. Gordon-Watson (49) says that an actively growing carcinoma in a young subject responds better to radium than a slow growing carcinoma in an elderly subject. Secondary irradiations are less likely to produce a good final result than an adequate primary irradiation. Radon is less efficient than radium. Radium is valuable in improving both the local and the general condition of an inoperable case so that in some instances operation with prospect of cure becomes possible. In cases of local recurrence it is an asset of great value. For epithelioma of the anus radium is probably more efficient than surgery.

Binkley (54) recommends preoperative irradiation followed by colostomy, followed by radon implantation in the growth, followed by surgical resection. In another paper (61) he advocates irradiation in the treatment of rectal cancer. He is of the opinion that the greatest value is to be obtained from the external application of radium and high voltage Röntgen rays, and the interstitial application of gold-filtered emanation seeds. He says: "Irradiation has a wider field of usefulness than radical surgery." He further points out that the effect of irradiation depends upon the dosage which reaches the growth. Carter (62) advocates radium irradiation in certain cases of cancer of the rectum and Röntgen irradiation in all cases.

(C) *ADDITIONAL METHODS:* Rankin and Bargen (40) have recommended intraperitoneal vaccination with bacillus coli communis and streptococci as a valuable asset in the treatment of malignant growths of the colon. In sixty cases there was a definite lowering of mortality from peritonitis and the postoperative convalescence was smoother.

Postoperative Mortality

Author		Route	Cases	Percent
Jones	(11)	Abdominoperineal	40	12.5
Heydemann	(23)	Abdominosacral	62	32.2
Hartmann	(37)	Various	210	3.5
Mandl and Pacher	(39)	Hochenegg	127	11.0
Dannheisser	(48)	Various	81	29.6
Binkley	(54)	Surgery and irradiation	42	47.6
Lockhart-Mummery	(55)	"First Group"		Nil

The following table will show the percentage of five-year cures obtained by the authors of the papers under review:

Author		Total Cases	Cured five or more years	Percent
*Hayden and Shedden	(6)	303	21	6.93
*Rankin	(8)	300	114	38.00
*Hartmann	(37)	555	13	2.5
**Mandl and Pacher	(39)	127	...	27.2
**Mandl	(41)	700	...	30.0
*Dannheisser	(48)	180	6	3.33
*Binkley	(54)	42	7	16.66
Lockhart-Mummery	(55)	"First group"	...	75.00
		"Second group"	...	55.00
		"Third group"	...	30.00
Binkley	(56)		2	
*Carter	(62)	60	15	25.00

*Figures based on all cases seen.

**Figures based on all cases considered operable.

(D) *RESULTS:* The results in the treatment of cancer of the rectum are not good, principally because the patient reaches the surgeon when his disease is already incurable. In spite of this fact both surgeons and radiologists, with that optimism that characterizes the medical profession, continue their endeavors to relieve symptoms and to effect permanent cures. The postoperative mortality is high, as the preceding table will show, the best results being obtained by Lockhart-Mummery in those cases which fall into his so-called "First Group" (55). The reader is referred to the original article for the author's grouping.

SUMMARY: In the case of a patient, man or woman, who consults the physician for rectal bleeding, indefinite digestive disturbances, recent constipation or aggravation of an already existing constipation, after listening to the patient's story and asking leading questions, which are allowable in the consulting room, he should make a digital rectal examination, following this with special instrumental study: proctoscopy, proctosigmoidoscopy, etc., perhaps barium enema. Having established the fact that there is a rectal lesion, consult with the surgeon and the radiologist. Decide on the advisability of biopsy. Have a competent pathologist give his opinion of the material. Then in continued consultation with the surgeon and the radiologist map out the further treatment.

At present it seems to us that in all except the very earliest cases, and probably in those in which there is a question, in spite of the histological findings, as to the malignant nature of the lesion, surgery followed by irradiation, or surgery preceded and followed by irradiation, offers the greatest hope for permanent cure.

The surgeon should give the decision as to the method of operation; the radiologist the decision as to the type of irradiation.

In the advanced inoperable cases deep X-ray irradiation should always be tried. But the radiologist should have at his command an instrument capable of delivering at least 200 K. V. and he should be trained in its use.

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Economics

(Concluded from page 49)

available at his need and his doctor, when needed, should be a cheerful witness at his call.

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There are some patients who are malingerers, some doctors to whom the proposed regulations will prove irksome. There are some insurance carriers and organizations, and some corporations who carry their own insurance as a side line, who will find it difficult to depart from the old ideas of "big business," but the reputable insurance companies and corporations with a just idea of the employee's welfare, and labor organizations and the medical profession through its organized units, should unite in a common cause of making legal the recommendation of Governor Lehman's Committee.

Survey of Research on Gonococcal Infections

A Committee for Survey of Research on the Gonococcus and Gonococcal Infections has been formed by the Division of Medical Sciences of the National Research Council, in cooperation with the American Social Hygiene Association. Its purpose is to collect, analyze, and collate the facts already established and the efforts now in progress to add to knowledge of the gonococcus and gonococcal infections, especially as regards bacteriology, pathology, immunity, mechanism of infection, and some of the forms of therapy. Attention will be concentrated chiefly on work done in the United States. At the close of the preliminary survey the Committee, with the assistance of a conference of experts, will compile a report with the object of stimulating interest in the study of the gonococcus, of providing a point of departure and of suggesting promising leads for further investigation. The survey will cover the literature, but it is hoped that unpublished work, and studies which were incomplete or whose results were inconclusive, may also be included.

Dr. Stanhope Bayne-Jones, Chairman, earnestly invites the cooperation of workers interested in this field. Other members of the Committee are Dr. Edward L. Keyes, Dr. Walter Clarke, Secretary, and Dr. Francis Blake, Chairman of the Division, ex-officio. Headquarters have been established at Room 1101, 450 Seventh Avenue, New York, where communications and reprints will be welcomed..

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Rhinolaryngology

Treatment of Hay Fever by Nasal Injections of Alcohol

H. H. Vail (*Archives of Otolaryngology*, 18:651, November, 1933) reports the treatment of a small series of cases of hay fever by the injection of alcohol into the inferior turbinates and beneath the mucosa of the nasal septum; in some cases the middle turbinates may also be injected. For these injections 40 to 60 per cent alcohol is used with procaine hydrochloride. Three cases of spring hay fever treated by this method were completely relieved of symptoms. Of 9 cases of autumnal hay fever treated, 5 obtained marked relief; in one of these cases two injections were necessary, one in the middle turbinates. In another patient with asthma and hay fever, the symptoms of hay fever were completely relieved; the asthma was not affected. Four of the 9 patients were not definitely benefited. The injection causes "shooting pains" in the temple, cheeks, nose and teeth which may be severe for ten to fifteen minutes, then gradually subside in the course of twenty-four hours; there may be some bleeding during this period, but no other ill effects have been observed. In the cases that are relieved of symptoms, the nasal mucosa shows a normal pink color. The author believes that this treatment is indicated in cases of hay fever in which pollen therapy has been unsuccessful and the patient is unable to seek a more suitable climate. He condemns the injection of alcohol into the sphenopalatine ganglion for hay fever and vasomotor rhinitis.

COMMENT

There is hardly a year passes that some new treatment is not advocated for hay fever. Injections of phenol and alcohol into the sphenopalatine ganglion is a method used by Ruskin and others with questionable results. It may do no harm to inject forty to sixty per cent alcohol into the nasal mucosa but one must be careful that sloughing of the tissues does not result. H. H.

Benzyl-Methyl-Carbinamine-Carbonate in the Treatment of Rhinitis.

H. V. Byrne (*New England Journal of Medicine*, 209:1048, Nov. 23, 1933) reports the use of benzyl-methyl-carbinamine-carbonate in 51 cases of rhinitis of various types. This preparation is a volatile carbonate of benzyl-methyl-carbinamine and is administered by inhalation; it is related "structurally" to ephedrin and epinephrin and has somewhat similar pharmacological properties. Over 50 per cent of the 51 cases treated (26 cases) were vasomotor rhinitis (or hay fever); 18, or 69 per cent, of these patients showed prompt and striking improvement—first, in the relief of sneezing and itching of the nose and eyes, and decongestion of the turbinates; later in the restoration of normal color to the nasal mucous membrane. Definite relief of sneezing, decongestion of the turbinates and diminution of the watery discharge were noted also in cases of acute rhinitis after inhalation of this drug. It had no beneficial effects in chronic hypertrophic rhinitis or in cases with a chronic nasal discharge of thick secretion associated with sinusitis. The use of this drug is indicated in those cases of rhinitis that show a nasal discharge of the thin watery type apparently due to changes in the osmotic tension of the capillaries of the mucosa, in which the drug acts chiefly through vasomotor control. The number of inhalations necessary varies from one every three hours to two to three a day, depending on the severity of symptoms.

COMMENT

It is always worth while to know of some new preparation to use in cases of acute rhinitis or vasomotor rhinitis. Anything that will control the osmotic tension of the capillaries is worth while using but we prefer to feel that the action of this drug is probably an individual one. H. H.

Adenoids and Immunity

H. B. Lemere (*Archives of Otolaryngology*, 18:326, September, 1933) has come to the conclusion that the adenoid is a physiologic lymphatic structure "designed to expose the greatest possible lymphatic surface as a barrier to the entrance of nasal infection through the nasopharyngeal mucosa into the general circulation." Accordingly in over 300 children on whom tonsillectomy was done in the author's clinic at the Marion Davies Foundation, Hollywood, the adenoids were left *in situ*. These children were given a prescription for a nasal douche and instruction in expulsive blowing exercises for daily use at home. The prescription for the nasal douche consisted of equal parts of sodium biborate and sodium bicarbonate with phenol and glycerin in peppermint water, to be diluted with three parts lukewarm water. The children were taught to hold the breath with the mouth open while the medicine runs into the nose. After using the douche and clearing the nose and throat, the blowing exercise is used. In following up these children, it was found that mouth breathing was relieved in all but one case in which removal of the adenoids was finally necessary. Very few patients developed acute otitis media. Colds were still fairly frequent, but cleared up rapidly under the cleansing treatment and exercises prescribed. The symptoms generally attributed to adenoids, the author believes, are in reality due to nasal infection; and as a rule can be relieved by leaving adenoids *in situ* as a protection against infection, aided by thorough cleansing of the nose and throat, rather than by removal of the adenoids.

COMMENT

It seems to us that this author has put the cart before the horse. He states that symptoms generally attributed to adenoids are really due to nasal infections. The truth of the matter is that it has been proved that nasal infection is usually due to a nasopharyngeal obstruction, most often adenoids. For the growth and well being of the child, we are firmly of the belief that the removal of adenoids is far more important than the removal of tonsils. The mouth breathing is not the only thing of importance. What is important is that experiments have shown that lack of nasal breathing means a lack of vitality and growth. H. H.

Nasal Papilloma

W. A. Wells (*Laryngoscope*, 43:905, November, 1933) reports a case of nasal papilloma in a man seventy years of age. The tumor was large, filling the entire nasopharyngeal space and extending downward "almost to the root of the tongue;" the growth extended outside the nostril on the right side over the upper lip. There was complete nasal obstruction on this side. In obtaining a specimen for biopsy excessive hemorrhage was produced. The laboratory report indicated a papillary carcinoma of low grade malignancy. The patient's general health was good, and locally there was no ulceration or infiltration of neighboring structures to indicate malignancy. Preliminary X-ray treatments reduced the vascularity of the tumor and the danger of hemorrhage. The intranasal growth was then removed, and subsequently large postnasal tumors, the latter with the cold wire snare introduced by way of the mouth. There was some recurrence of the growth a few months later; treatment with the X-ray reduced this growth and the patient remained well. A review of the literature shows that papilloma of the nose is very rare, not more than 100 cases having been reported in the literature to date. There are two types—vestibular-choanal tumors, generally single and circumscribed; tumors deep seated in the fossa, generally multiple. Nasal

papilloma cannot be classed definitely as either benign or malignant; they may be histologically carcinomatous, but show no clinical symptoms of malignancy except hemorrhage and a tendency to recurrence after operation. X-ray is of value in treatment.

COMMENT

It is reassuring to know that the majority of papillomata of the nose show no clinical symptoms of malignancy although histologically they are one of the varieties of carcinoma. This article proves the necessity for careful observation, careful surgical treatment and persistent x-ray treatment.

H. H.

Ozena and Tonsils

G. Halász *(Monatsschrift für Ohrenheilkunde,* 67:1176, October, 1933) concludes from his study of ozena, that it is of endocrine etiology, and due primarily to tonsillar hypofunction, combined with hypofunction of the glands closely related to the tonsils—the thyroid and the thymus. The inner secretion of the tonsils, he believes, is the hormone that regulates the condition and the function of the mucous membrane of the upper respiratory tract. It has been observed that the symptoms of ozena show a definite exacerbation after an attack of tonsillitis. On the basis of this theory, he has treated cases of ozena with a pluriglandular extract, a single dose containing 5 gm. tonsil extract, 1 gm. thymus and 0.1 gm. thyroid extract. In all cases treated, the crusts began to loosen and the fetor to diminish after the first few injections of this extract. Finally all crust formation ceased, and in four to six weeks, the nasal mucous membrane showed a normal color and consistency. Of 26 cases treated, 6 had a slight recurrence of symptoms, that yielded to a second, much shorter course of treatment; 18 have remained well for varying periods up to fourteen months; and 2 are still under treatment, showing progressive improvement.

COMMENT

It is startling for one to find out that the tonsils are now held responsible for ozena. It seems that every gland in the body or at least a combination of glands has been responsible for this disease. We wish the solution of the problem was as easy as all that. We have seen ozena respond to simple washing of the nose, the injection of vaccines, the implantation of ivory, the transplantation of the outer nasal wall and the administration of radium. We have seen patients get well spontaneously and others have not responded to any type of treatment. At a recent meeting of the New York Academy of Medicine this subject was fully discussed and the conclusion was that no one could point to any definite etiological factor and that the narrowing of the nose on the affected side was the best method of treatment. *H. H.*

How May the General Practitioner Recognize Paranasal Sinus Disease?

D. Mezz *(Medical Journal and Record,* 138:316, Nov. 1, 1933) states that the signs and symptoms that are suggestive of an acute sinusitis observed in association with head colds, influenza, etc., are severe localized head pains, purulent nasal discharge, and a moderate septic temperature. The symptoms that indicate a chronic sinusitis are: Chronic nasal discharge; chronic throat irritation with hawking; recurrent head colds; extraseasonal symptoms of nasal obstruction in hay fever patients; chronic supraorbital, intraocular or occipital headache when other causes of such headache can be eliminated; chronic bronchitis and asthma not due to allergy, especially if there is a history of chronic postnasal discharge and other symptoms of sinusitis as noted; and in young persons a general rundown condition not improving under general therapy and attended by cough, anorexia, unexplained gagging or vomiting, enlarged cervical nodes and "lymphoidal studs on the posterior pharyngeal wall." For the definite diagnosis of sinus disease, a thorough rhinoscopic study, transillumination, and X-ray study are necessary. And such a study is generally left to the specialist.

COMMENT

The general scare that the public have when one mentions sinus disease makes one realise that the prevalence of this condition is due to many factors and that the majority of people would not worry half as much about it if it were not considered such a serious condition. The general symptoms are self evident to any physician but the majority of cases are not of a sufficiently serious nature for one to be alarmed. A prominent x-ray specialist has stated that he discovers so-called sinus disease in ninety per cent of all cases examined. Of course this is in a large city where a hyperplastic condition of the mucosa of the sinuses is bound to occur. Of more importance, however, is the fact that the majority of general practitioners do not seem to realise that the head belongs to the rest of the body and that most cases of sinus disease are best treated by increasing the physical well being of the patient. We would advise a thorough study of all patients who are seriously ill but we certainly advise that the furore of sinus disease be overcome in some way and that treatment be aimed mainly toward bringing the patient up to par.

H. H.

Otology

Treatment of Otitis Media

C. M. Anderson *(Minnesota Medicine,* 16:610, October, 1933) reports the conservative treatment of a large series of cases of chronic otitis media at the Mayo Clinic. Four types of chronic otitis media are distinguished at this Clinic: 1. Cases with perforated ear drum through which mucoid is discharged; 2. Cases with perforated ear drum with drainage of pus and sometimes necrosis of the ossicles and bony structure; 3. Cases with foul, scanty discharge, infection, necrosis and possibly cholesteatoma; 4. A combination of type 3 with irritation of or extension into the secondary structures. All but type 4 may be treated conservatively, but in type 3 conservative treatment must often be combined with operative measures to remove debris, clean out the cholesteatoma, and possibly remove the remaining portions of the ossicles. Conservative treatment in all three types consists in: Treatment of any infection that may be present in the upper respiratory tract; correction of the nose blowing habit; careful cleansing of the ear; instillation of some medicament into the ear. The solutions used for instillation at the Clinic are: Saturated solution of boric acid in equal parts of alcohol and 1:1000 solution of mercury bichloride; 25 per cent solution of argyrol; 1 to 2 per cent solution of mercurochrome; and 1:500 solution of metaphen. The ear is cleaned with hydrogen peroxide and sponged dry with cotton swabs; any remaining moisture is removed by means of air blown into the ear with a hand bulb, or the careful use of compressed air; the solutions are instilled into the ear, the attic, and if possible the mastoid antrum, using a thin flexible silver cannula bent upward at the tip and attached to a metal syringe. In the cases treated, discharge ceased and the ear remained dry in 54 per cent; in 46 per cent there was still some discharge when treatment was discontinued, but the ears subsequently became dry in 10 per cent of these cases.

H. L. Lillie *(Minnesota Medicine,* 16:613, October, 1933) discusses the operative treatment of these 4 types of chronic otitis media. He concludes that the mastoid operation is not indicated in type 1; operative measures on the pharyngeal or aural end of the Eustachian tubes may be indicated. In type 2 intra-aural procedures are indicated to remove polypi, exuberant granulations, casts of desquamated epithelium and occasionally necrotic ossicles. In type 3, in addition to the simple intra-aural procedures suggested as a part of the conservative treatment, the intra-aural operation suggested by Tobey may be used in some cases. If the tense portion of the drum is intact and the disease is confined to the attic and antrum, the modified radical operation may be done in some cases. If evidence of necrosis persists, or a cholesteatoma continues to cause symptoms, operation is indicated, the procedure used depending upon the indications in each case. In cases of type 4, operation is indicated; if there are signs of labyrinthine irritation, of dural exposure, or of invasion of the blood stream by infection, operation should not be delayed.

COMMENT

This excellent article of Anderson's is well worth studying. We are happy to note that he advocates conservative measures except in the extreme cases. Dr. Lillie discusses operative treatment of these four types. There is no comment for us to make except to again repeat that we are in entire accord with these conservative procedures. *H. H.*

Blood Infection from Otitis Media

E. J. Gilroy Glass (*Journal of Laryngology and Otology,* 48: 754, November, 1933) reports a study of 63 cases of blood infection from otitis media; the total mortality was 57 per cent. The mortality was relatively low in children under ten years of age; in cases in which the mastoid operation was done during the first week of the otitis; in cases developing metastatic abscess; and in hemolytic streptococci infections treated with anti-scarlet-fever serum. The mortality was high in patients over fifty; in chronic suppurative otitis with acute exacerbation; if septicemia developed before the mastoid operation was done; and in cases developing subcutaneous hemorrhages or jaundice.

COMMENT

It is regrettable that the majority of cases in which bacteria can be found in the blood should result in such a high mortality. We feel sure that the majority of these patients would have benefited considerably by repeated blood transfusions.

H. H.

Severe Deafness in Adults

G. E. Shambaugh and his associates *(Archives of Otolaryngology,* 18:430, October, 1933) report a study of 165 adults with deafness of so severe a type as to constitute a definite handicap. In 30, a primary nerve deafness was diagnosed, caused by a congenital defect in 2 cases; toxic neuritis from an acute infectious disease in 5 cases; noisy occupation in 2 cases; senile changes in 7 cases; syphilis (probably) in one case. In 12 cases no cause could be determined, but in 6 of these the presence of the labyrinthine type of otosclerosis was suspected. In 20 cases the diagnosis was a tubotympanic middle ear disease. In 115 cases the diagnosis of otosclerosis with primary fixation of the stapes was made. The authors conclude that only 12 per cent of severe adult deafness is due to middle ear disease beginning in childhood, and preventable by examination of school children; in the majority of instances severe deafness in adults is due to otosclerosis and "neither preventable nor amenable to treatment in the present state of knowledge."

COMMENT

We have repeatedly disagreed with Shambaugh and his associates about this question of otosclerosis. They believe that otosclerosis is prevalent in the majority of cases of deafness. We entirely disagree with them. It would be indeed unfortunate if we agreed, for otosclerosis is not a remediable disease and the outlook for the future is practically hopeless. Moreover, otosclerosis is hereditary. In the examination of hundreds of cases of deaf people, both children and adults, we have reason to feel that the majority of them can have their hearing improved and in some cases brought up to almost normal. The controversy between Shambaugh and his associates and the majority of otologists who are connected with the American Federation of Organizations for the Hard of Hearing has gone on for a number of years. We are happy to state that the longer we study the subject the surer we are that the majority of cases of deafness are not otosclerotic in character.

H. H.

The Ear in Caisson Disease

J. Korte *(Folia oto-laryngol., Part 1, Original,* 24:349, November, 1933) notes that the ear of caisson workers may be affected in both the processes of compression and of decompression by the mechanical effect of the changes in air pressure. The symptoms usually noted are pain or a feeling of fullness in the ears. This has no lasting effect. Persons with perforated ear drums resulting from a previous otitis do not show these symptoms. The labyrinth, however, may be more or less seriously affected in cases in which a gas embolus occurs and in which other symptoms of caisson disease are present. This is evidenced clinically by the occurrence of the Menière symptom complex and sudden nerve deafness. As long as the gas embolus results in only temporary ischemia, these symptoms are also of short duration and the prognosis is good. But if necrotic changes or hemorrhages occur, the damage may be serious and permanent. In recent times caisson disease is becoming increasingly rare, owing to care taken in securing gradual increase of pressure and still more gradual decompression, shortening the hours of labor, and selecting workers more carefully. Men with Eustachian tube and nasal catarrh are not suitable for caisson work; but those with dry perforations of the drum membrane may safely be employed, and may be particularly well suited for the work.

COMMENT

We are happy to find out that this disease is becoming increasingly rare. Twenty years ago the disease was so prevalent in tunnel workers that it became a menace to any man to work underground. The effective changes that have taken place are due to the excellent work of men like Korte who have brought the matter to the attention of the public.

H. H.

Clinical, Roentgenological and Operative Findings in 158 Cases of Mastoiditis

H. M. Berg and G. M. Constans *(American Journal of Roentgenology,* 30:452, October, 1933) report 158 cases of mastoiditis, in which roentgenograms were made prior to operation. In 131 of these cases operation was done within twenty-four hours after the roentgenographic examination; in one case of chronic mastoiditis not until thirteen days after; in the other cases from one to three days after. The greatest number of cases occurred in patients under ten years of age. The mastoiditis was of the acute type in all but 8 cases; 10 of the acute cases showed some complication, chiefly lateral thrombosis (7 cases). The characteristic symptoms of mastoiditis were present in practically all cases; there was pain over the mastoid in 134 cases; and tenderness to pressure was an almost constant symptom. Cultures were taken from the mastoid at the time of operation in all but 38 cases; streptococci were the predominating organisms, being found alone or in combination with other organisms in 58 cases; pneumococci were present in 23 cases. Three deaths occurred in this series, a mortality of 1.9 per cent, due to lateral sinus thrombosis in 2 and cerebellar abscess in one case. In the roentgenographic examination, bilateral stereoscopic films in the Law position were taken as a rule; in a few cases the Granger-Arcelin position was employed. The roentgenograms showed an adult type of mastoid in 130 cases, infantile type in 28 cases. The majority of the cases showed medium sized cells; zygomatic cells were present in 20 cases. There was a marked degree of opacity of the antrum in all but 3 cases, pus being found at operation; in the 3 cases showing no opacity of the antrum, pus was also found at operation; in these cases the films showed the location of the sinus. Roentgenological evidence of cell necrosis was found in 128 cases, and all but 2 of these showed cell necrosis at operation. In 113 of these, the cell necrosis was shown by the loss of cell outline; in 11 by a new sign of cell necrosis consisting of slight widening of the cell wall with evidence of increased density of the wall and a "fine fuzziness" of its edge, but without loss of cell outline; in 4 cases by Granger's sign. In 20 cases, the roentgenograms did not show evidence of cell necrosis, but necrosis was present at operation. The roentgen examination in mastoid cases, the authors conclude, is not only of assistance in determining the presence of cellular necrosis, but also it is of value to the surgeon in showing the anatomical conditions prior to operation.

COMMENT

This excellent article indicates to us the value of x-ray pictures in all cases of suspected mastoiditis. The x-ray findings are of value for a number of reasons. Not only do they indicate the amount of involvement but very often they will show the position of the lateral sinus. It is not advisable for any otologist to depend upon the reports of the roentgenologists. He should see the pictures himself and should be able to interpret them and correlate them with the clinical findings. We have in mind one case where the x-ray findings were practically negative due to a thickened cortex and a destruction of most of the cells from previous disease. However, the clinical picture was such that the patient had to be operated upon. In another case, the x-ray pictures showed definite destruction of many of the mastoid cells. Drainage through the middle ear was sufficient in this case for all symptoms to disappear within a reasonable length of time. Of chief value is a comparison of repeated x-ray pictures where one can note the advance or retardation of the disease process.

H. H.

Gynecology

Calcium (Psammoma) Bodies in the Fallopian Tubes and Ovaries

W. W. Wilson *(Western Journal of Surgery, Obstetrics and Gynecology,* 41:614, November, 1933) reports a case studied at the University of Oregon, in which a woman forty-two years of age complained of pain and tenderness over the abdomen, accentuated at menstruation; the uterus was normal, and there was a tender mass in the region of the left ovary. A diagnosis of chronic salpingitis was made; and at operation both tubes and the right ovary were removed; the left ovary was normal. Microscopical examination of sections from the tubes and ovary showed numerous round and oval concentrically laminated foreign bodies on the peritoneal surface, in the submucosa and mucosa, and free in the lumen of the tubes. Chemical analysis showed these bodies to consist chiefly of calcium phosphate. They corresponded histologically and chemically to the text-book descriptions of psammoma bodies; and also to the calcium bodies or deposits described in German literature as occurring in the Fallopian tubes. Microscopic examination of specimens from 251 cases of tubal and ovarian disease from the University Department of Pathology showed that these psammoma or calcium bodies are present in a considerable percentage of neoplastic and chronic inflammatory diseases of the Fallopian tubes and ovaries. They occasionally form serosal tubercles which cannot be distinguished macroscopically from those observed in tuberculous salpingitis. They also form microscopic lesions that may be erroneously con-

sidered to be tuberculous or post-tuberculous in character. "This error may explain the high incidence of tuberculous salpingitis reported by some hospitals and clinics." The genesis of these bodies in the adnexa is not known. It may be that altered tissue metabolism results in a precipitation of lime salts from the tissue juices.

Some Aspects of the Menopause

B. Whitehouse *(Canadian Medical Association Journal,* 29:585, December, 1933) holds that menstruation is the clinical manifestation of two factors—the luteal or "ovulatory" factor and the oestrual factor, the anterior pituitary-like sex hormone. If the first factor were alone involved, menstruation would represent simply "the abortion of a useless decidua." But menstruation is accompanied by a general and local hyperemia and by increased thyroid activity which must be attributed to the action of the essential sex hormone. Normally menstruation results from both necrosis and hyperemia of the endometrium, but it may be caused by one factor only. The clinical symptoms of the menopause, the author believes, are to be explained as due to "a breakdown in the correlation" between the two factors. Ovulation frequently becomes irregular in the menopause, but the normal cyclical "oestrual" phenomena occur just the same. It is this action of the oestrual factor or essential sex hormone, in the absence of regular ovulation, that causes the flushings and other vasomotor disturbances of the menopause. The administration of ovarian extract containing the oestrual hormone, therefore, is not indicated in the menopause; if it does relieve the vasomotor symptoms temporarily, it is because it causes a uterine hemorrhage. Insulin is an antidote to oestrin; and the author has employed insulin in the treatment of a few cases of severe menopausal headaches and flushing, with good results. This would also explain why the conservation of the ovaries after hysterectomy does not always prevent the occurrence of symptoms of an artificial menopause.

Bone Metastases in Carcinoma of the Cervix

K. Traube *(Zentralblatt für Gynäkologie,* 57:2909, Dec. 9, 1933) finds that bone metastases have been observed with relative frequency in recent years, in cases of carcinoma of the cervix at the gynecological clinic at the University of Prague. This frequent incidence of these metastases may be due in part to the increasing use of the Roentgen rays for the diagnosis of such bone lesions. These metastases occur in cases operated by both the abdominal and the vaginal route; and in cases treated by radium and the Roentgen-rays. They occur in cases operated early before the parametrium was involved; and in cases in which adequate radiotherapy has resulted in disappearance of the primary tumor. Such bone metastases are best treated by prolonged fractional Roentgen-ray therapy. This treatment is not curative, but has a marked palliative value in relieving pain and other symptoms.

Endometriosis

E. Allen *(American Journal of Obstetrics and Gynecology,* 26:803, December, 1933) reports 112 cases showing endometrial lesions, operated by himself and his associates. The youngest patient in this series was seventeen years of age, the oldest sixty-seven; 39 women were between thirty-one and forty; 42 between forty-one and fifty-one; of 5 patients between fifty-two and fifty-five, only 2 had ceased to menstruate before symptoms of endometriosis began. Eighty-eight of these women were married and of these 41 had had full-term pregnancies—in most instances some time before symptoms of endometriosis became manifest. In addition 18 patients had become pregnant, but had aborted, giving a 60 per cent relative sterility. Sixty-one of the patients had menorrhagia, 18 metrorrhagia, 48 backache of the lumbosacral type, and 25 pain in the lower abdomen. The lesions were distributed as follows, a number of patients showing multiple lesions: ovaries, 60 cases; uterus, 53 cases; peritoneal, 16 cases; adenoma rectovaginal septum, 37 cases; abdominal, 3 cases; bowel, 4 cases; bladder, 3 cases; appendix, one case. The different types of operation employed included hysterectomy in 82 cases, resection of growth in 41 cases, unilateral oophorectomy in 36 cases, and bilateral oophorectomy in 13 cases. Ovarian function has been retained in all but the last group of 13 cases; 9 of these cases were over forty years of age and all had lesions not *resectible.* In these cases the author notes as the most outstanding features the high incidence of menstrual irregularities; a high incidence of associated uterine tumors—46 fibromyomas and 15 other tumors showing adenomatous changes; the marked prevalence of relative sterility; and the wide distribution of lesions. The author regards endometriosis as a manifestation of cellular metaplasia caused by glandular dysfunction; the associated fibromyomas and fibroadenomas are additional results of changed cell stimulation. He notes that the prolonged administration of potent glandular products "may be fraught with danger" until we know more about their action.

Prevention of Cancer of the Cervix Uteri

H. S. Crossen *(American Journal of Obstetrics and Gynecology,* 26:686, November, 1933) points out that with the definite advance made in the methods of treating carcinoma of the cervix, only 20 to 25 per cent of all cases are cured. Yet 95 per cent of early cases are cured. The reason that the percentage of cures is relatively small is because only very few cases of cancer of the cervix are seen in the early stage. This is shown by statistics from all clinics; the author's own statistics from the Barnes Hospital of the Washington University Medical School shows that of 121 cases of cancer of the cervix treated in 1921 to 1926 only 3 were in an early stage, all the others showing extensive infiltration of the parametrium. All these 3 cases were cured, but the percentage of five year cures for the entire series was 22 per cent. This is due primarily to the fact that the really early stage of cancer of the cervix causes no symptoms; and the only way in which deaths from cancer of the cervix can be markedly reduced is by the systematic and early removal of the chronic irritative lesions of the cervix that precede cancer. Palliative treatment for chronic irritative lesions of the cervix, such as cervicitis, "ulceration," laceration, eversion, erosion and polypi of the cervix, may keep the patient fairly comfortable but does not remove the deep chronic irritation that favors the development of cancer. The author urges that in treating patients with inflammation or irritation of the cervix, any area of chronic irritation should be removed by excision or other radical measure; this rule should apply even to women in the childbearing period. Patients in whom acute irritation has cleared up under treatment, should be given occasional check up examinations. Patients who come for other conditions should be asked about leucorrhea and other evidences of pelvic disturbances, and examination made as indicated. Local examinations should be recommended to women patients once a year from the age of thirty-five to fifty-five. In addition to all this prophylactic care of the physician, the present educational work should be extended to include measures to bring before women generally the importance of local pelvic examination so that any existing irritation of the cervix may be removed before cancer develops.

COMMENT

Dr. Crossen has "hit the nail on the head" relative to the prevention of cancer of the cervix. If, with all the modern methods for treating cancer of the cervix, we still can cure only 20 to 25%, then prevention, if feasible, had better be more intensively practiced. We find that 95% of the cases can be cured if diagnosed early when the cancer is a localized growth and this is equivalent to saying that the best treatment for cancer of the cervix is early diagnosis. In a nutshell, therefore, we may say that prevention is the best "cure", but if prevention fails early diagnosis will still save the patient. The in-between cases are difficult and unsatisfactory problems both for the physician and patient—the patient finally succumbs and the physician is disheartened. What a blessing to women a specific cure would be! H. B. M.

Obstetrics

Blood Velocity in Normal and Pathological Pregnancy

W. Spitzer *(Archiv für Gynäkologie,* 154:449, Nov. 7, 1933) reports a study of the blood velocity in normal primiparae and multiparae, and in cases of pregnancy toxemia, eclampsia, and cardiac disease in pregnant women. The decholin method of Winternitz, Deutsch and Brill was used for determining blood velocity, as this has proved most satisfactory for the diagnosis of cardiac insufficiency. In normal pregnant women, whether primiparae or multiparae, the blood velocity was found to be within normal limits, indicating that pregnancy does not normally interfere with cardiac function. In 13 cases of severe pre-eclamptic toxemia, the blood velocity was definitely reduced in 4 cases; in 5 cases of eclampsia it was reduced in 3 cases. As there was no peripheral cause for this reduction of blood velocity in these cases, it must be considered as due to a beginning myocardial injury resulting from the toxemia. In the cases with cardiac disease, it was found that the blood velocity was the best indication of the degree of myocardial damage; and the author is of the opinion that it is the best criterion as to whether interruption of pregnancy is indicated or not because of the condition of the heart.

Pituitary Extract in Obstetrics

C. R. Alden *(New England Journal of Medicine,* 209:1211, Dec. 14, 1933) is of the opinion that the wisdom of administering pituitary extract before the second stage of labor "may be

(Continued on page 64)

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Dumb Therapists

The most cursory survey of hospital records discloses a disquieting fact—the abuse of coal-tar derivatives in the treatment of a wide range of ailments—medical and surgical—which demand supportive management from all points of view and should never be subjected to the effects of depressing drugs, no matter what specious justification may be adduced.

We are a little uncertain about apportioning the blame for this state of affairs. To just what degree responsible visiting men are to be blamed, and to just what degree house-staffs are culpable, we cannot hazard an opinion.

In the case of heroin we have managed excellently by abolishing the curse altogether.

Some hospitals have given up the use of whiskey, for the retention of which a much beter case can be made out than for the coal-tar derivatives.

We venture the drastic suggestion that the coal-tar derivatives be banished from our hospitals, however much commercial interests may be peeved thereby.

We don't need a survey and a report by a committee of pundits. There is too much of that sort of thing in the face of patent conditions.

Do it now, without talking too much about it.

More Contraception Tomfoolery?

In *Birth Control in Practice,* just issued, we find an analysis of ten thousand case histories of the Birth Control Clinical Research Bureau, made under the alleged supervision of a Scientific Advisory Committee. The members of the committee are named and they are all eminent enough, goodness knows. But we suspect that this is just another case of window dressing, as the popular phrase has it, for the report's compilations, computations, analyses and tables all seem to be weak in a fundamental and essential element—that relating to time.

The report states that of 7,361 women more than one quarter have used "protective" measures for one year or longer, while nearly one-half of this group have used them less than one year. Certain contraceptive measures, regularly utilized by 5,450 women, "protected" 93.3 per cent of the Bureau's trusting charges.

"One year or longer" might mean a year and a day. "Less than one year" might mean six months. Such periods are very short stretches in the child-bearing life of a woman.

Is not this a fatal weakness, tending to nullify any value the book might otherwise have? Can such a piece of work be regarded as a worthy contribution to science? Can the Advisory Committee be taken very seriously in this connection? We wonder.

Curious Financing

The annual report of the Milbank Memorial Fund, which contributed largely to the expenses of the Committee on the Costs of Medical Care, admits failure of attempts to work out a system of socialized medicine. With this amusing chagrin, however, is mixed the hope that the depression will in some manner yet humble and coerce the profession into compliance with the Milbank outfit's desires. "The need for such a national plan," says the report, "has long been felt. It seems now that the time has come when it should be formulated and put into action." *It was with this result in mind that the Fund advanced its money grants to the Wilbur Committee.*

One of the principal plaints of the Milbank crowd is that medical care is not properly distributed. The primary consideration having to do with the proper distribution of goods and wealth does not harass them at all. Essentially, are they not tied up with the discredited laissez faire policy: exploit the people and then draft the medical profession to take care of the wretched human by-products?

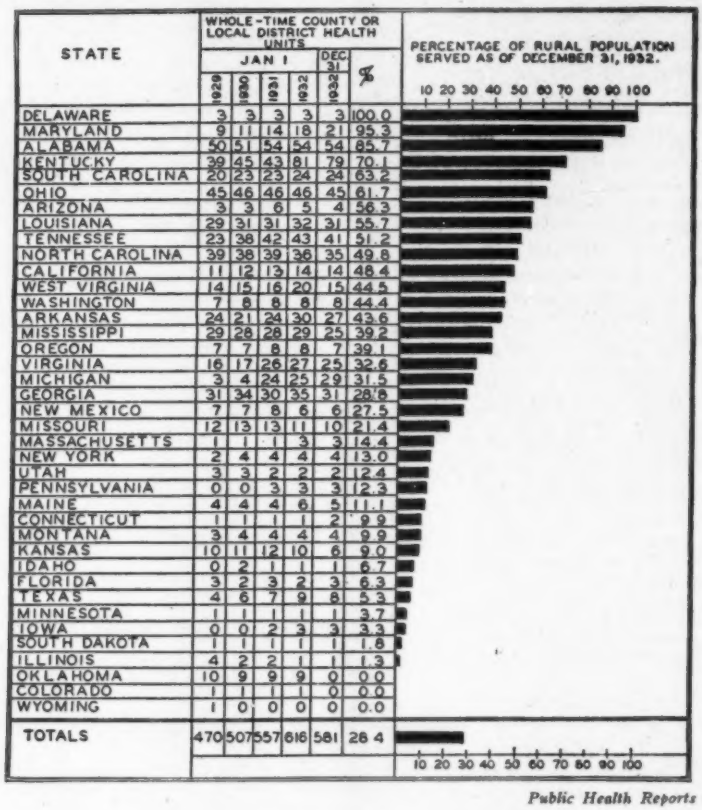
An ironical phase of this matter is the fact that so many of the business men of the reform-the-medical-profession type helped to bring about the depression because of the breakdown of their own distributive methods, not to mention more reprehensible factors.

When our sick industrialists adopt a code similar in ethical significance to the Hippocratic code, there will be no need to talk about the socialization racket.

Dr. J. Bentley Squier has said that "Most medical men devote at least one-half of their entire time to the unremunerative care of the poor and only a part of their time for their own financial benefit. Perhaps the business order will think this over and adopt some such code for itself."

Rural Hygiene

It seems rather strange that 71.6 per cent of our rural population is not yet provided with the type of health organization which is best adapted to rural areas.



STATE	WHOLE-TIME COUNTY OR LOCAL DISTRICT HEALTH UNITS JAN 1 1929	1930	1931	1932	DEC 31 1932	%
DELAWARE	3	3	3	3	3	100.0
MARYLAND	9	11	14	18	21	95.3
ALABAMA	50	51	54	54	54	85.7
KENTUCKY	39	45	43	81	79	70.1
SOUTH CAROLINA	20	23	23	24	24	63.2
OHIO	45	46	46	46	45	61.7
ARIZONA	3	3	6	5	4	56.3
LOUISIANA	29	31	31	32	31	55.7
TENNESSEE	23	38	42	43	41	51.2
NORTH CAROLINA	39	38	39	36	35	49.8
CALIFORNIA	11	12	13	14	14	48.4
WEST VIRGINIA	14	15	16	20	15	44.5
WASHINGTON	7	8	8	8	8	44.4
ARKANSAS	24	21	24	30	27	43.6
MISSISSIPPI	29	28	28	29	25	39.2
OREGON	7	7	8	8	7	39.1
VIRGINIA	16	17	26	27	25	32.6
MICHIGAN	3	4	24	25	29	31.5
GEORGIA	31	34	30	35	31	28.8
NEW MEXICO	7	7	8	6	6	27.5
MISSOURI	12	13	13	11	10	21.4
MASSACHUSETTS	1	1	1	3	3	14.4
NEW YORK	2	4	4	4	4	13.0
UTAH	3	3	2	2	2	12.4
PENNSYLVANIA	0	0	3	3	3	12.3
MAINE	4	4	4	6	5	11.1
CONNECTICUT	1	1	1	1	2	9.9
MONTANA	3	4	4	4	4	9.9
KANSAS	10	11	12	10	6	9.0
IDAHO	0	2	1	1	1	6.7
FLORIDA	3	2	3	2	3	6.3
TEXAS	4	6	7	9	8	5.3
MINNESOTA	1	1	1	1	1	3.7
IOWA	0	0	2	3	3	3.3
SOUTH DAKOTA	1	1	1	1	1	1.8
ILLINOIS	4	2	2	1	1	1.3
OKLAHOMA	10	9	9	9	0	0.0
COLORADO	1	1	1	1	0	0.0
WYOMING	1	0	0	0	0	0.0
TOTALS	470	507	557	616	581	28.4

PERCENTAGE OF RURAL POPULATION SERVED AS OF DECEMBER 31, 1932.

10 20 30 40 50 60 70 80 90 100

Public Health Reports

The chart shows, by states, the number of counties, townships or districts with health service under the direction of local whole-time health officers.

M. W. T.

The Futile Science

The place in which eugenics should have been instituted was the Garden of Eden, and it should have been continued under the auspices, not of a board of eugenists, but of angels. What can be done now about a Goebbels, dwarfed and club-footed Director of Propaganda in Hitler's Germany? What, indeed, can be done about "handsome Adolf" himself?

Sanitary Dispensing of Food and Drinks

A committee has been organized under the chairmanship of Dr. Alec Nicol Thomson to conduct an educational campaign to promote sanitation and prevent the transmission of infectious diseases at soda fountains, in restaurants and in other places purveying food and drinks to the public.

The recent disastrous epidemic of amebic dysentery, due undoubtedly to the insanitary dispensing of food and drinks in public eating and drinking places, gives much immediate point to the effort of Dr. Thomson and his colleagues.

Today insanitary practices in public eating and drinking places are widespread. Dr. Thomson cites one of the most common of these—that of a glass which a customer has just finished using, hurriedly dipped into lukewarm, and often dirty water, and immediately thereafter used for serving another customer. While no one approves of such practices, they are generally accepted without protest. Thus, the apathy of the public often results in the needless spread of disease. Such abuses can be eliminated only by public protest.

An intensive educational campaign is now being carried on by the Committee before women's clubs and other consumer groups.

Dr. Thomson reminds us of the study of the influenza epidemic during the war, proving that "in three types of public eating places in a large city, there were eighty-five per cent more cases of influenza among people eating from hand-washed dishes not disinfected by boiling water than among those people eating from thoroughly sterilized dishes." He also instances other studies from which it may be deduced that improperly sterilized eating utensils are responsible for the spread of mouth-borne diseases. Influenza, whooping cough, dysentery, diphtheria and the common cold are examples of diseases spread in this way.

This is merely another case of knowledge unapplied. In the meantime we profess to be engaged in an earnest experimental search to discover the means of controlling the common cold. The avenue that we should travel along to mastery plainly invites us and yet we dumbly hesitate, fumbling with our test tubes and laboratory animals.

Dr. Thomson and his group should be strongly supported on all sides.

Abate the filthy utensil racket!

Not Downhearted

Dr. Henry E. Sigerist, of the Johns Hopkins faculty, declares that there is one lesson that can be learned from history—that the physician's position in society is never determined by the physician himself, but by the society he is serving. Dr. Sigerist thinks we can oppose the development, we can retard it, but we will never be able to stop it.

Even if this is all true of the past, it is entirely too fatalistic for the present.

Dr. Sigerist is talking about the doctor, not about medicine itself; the workaday doctor is one thing—medical science, in the abstract, as it were, is another thing. The practitioner may be too absorbed in his "vocation" to have any insight; he is only the poor relation of the genius in medicine and may have little or no understanding.

The citadel of medicine itself is impregnable.

Dr. Sigerist leaves out of consideration those whom we have called, for want of a better name, the geniuses in medicine who may yet defy the fates in our behalf—against the socialization of the medical profession, for example, which Dr. Sigerist thinks is inevitable.

Not so long ago thinkers of Dr. Sigerist's type would have confidently expected the nationalization of the religious bodies in Germany. What, in fact, do we behold? Their position in society is not being determined by the dictatorship and the powerful forces behind it.

It does not follow that the socialization of the medical profession is "inevitable."

Laws Against Contraception

Believing as we do that contraception as at present applied is a good deal of a fake we cannot get up any enthusiasm about the laws on the subject. We should not wish to join in any battle over them.

Sometimes the opposition to repeal of the laws makes us feel that its vigor implies a naive endorsement of the absurd claims made by the contraceptionists with respect to the efficacy of their barbarous contraptions.

Should the laws against which the contraceptionists rave be repealed or not? One medical argument against such repeal is that the whole flood of unreliable methods (and they are all that) would be commercially loosed upon the people (particularly, gullible young people). The best argument, by all odds, is that which seeks to make legitimate birth control wholly a matter for medical jurisdiction and control.

To those thoughtful physicians who, as an oppressed minority themselves, went through the prohibition experience and realize fully the ultimate results of oppression, nullification or breakdown of the laws hampering the birth-control group will mean nothing tragic—aside from the question of criminal abortion. But necessarily, in time, the whole biological matter, in its legitimate and perfected phases, will rest in the hands of the profession and not in the hands of clumsy fools. We can discern nothing here for civilized men to become excited over.

Oppression never hurt a cause—good or bad. As a matter of fact, contraception plus abortion is now at its zenith despite the laws. Objection to the laws is mainly a behavioristic gesture, engendered by emotional reactions having a not unwholesome basis.

But criminal abortion, a grievous biologic offense, necessarily calls for discipline, and a liberal position is none the less liberal because of the proscription of abortion.

We once facetiously suggested that the fanatical proponents of birth control, in any form that it might take, be themselves formally exempted from the operation of proscriptive laws.

It is in education and enlightenment, and in social and economic reform, not in laws, that we must seek safety and salvation.

Miscellany

The Salivary Ritual

Among the Primitives

It is fortunate that casserie is manufactured by an extremely slow, laborious process, since the women, who are the drink-makers, in the first place have to reduce the material (cassava bread) to a pulp by means of their own molars, after which it is watered down and put away in troughs to ferment. Great is the diligence of these willing slaves; but, work how they will, they can only satisfy their lords' love of a big drink at long intervals. Such a function as that at which I had assisted is therefore the result of much patient mastication and silent fermentation—the delicate flower of a plant that has been a long time growing.

—From W. H. Hudson's *Green Mansions.*

Among the "Civilized"

Today insanitary practices in public eating and drinking places are widespread. Dr. Alec Nicol Thomson cites one of the most common of these—that of a glass which a customer has just finished using, hurriedly dipped into luke-warm, and often dirty water, and immediately thereafter used for serving another customer.

—From a statement recently issued by Homer N. Calver, Executive Officer, Committee for the Study and Promotion of the Sanitary Dispensing of Food and Drinks, 450 Seventh Avenue, New York City.

Shortcomings of Psychoanalysis

It is today generally admitted, even by those who call themselves the friends of psychoanalysis, that it is in many ways at least a flimsy structure; that its technique is unreliable, enabling the psychoanalyst to discover in his patient practically anything that he may wish to find; that very much of its theory is absurdly fantastic and conflicts with ordinary common-sense; that as a therapeutic procedure it is far from satisfactory and in many cases does more harm than good. Psychoanalysis continues to be tolerated, however, largely because along with its error there is undoubtedly a certain amount of valuable truth. It is generally assumed that its defects are superficial and will be corrected in time; that, in other words, with proper pruning phychoanalysis will prove to be the root from which a real science of psychopathology will eventually develop. With this optimistic opinion I am quite unable to agree. The trouble with psychoanalysis, as I see it, is not a matter of superficial defects in the superstructure. It is a matter of the essential unsoundness of the foundation upon which the whole psychoanalytic edifice has been erected.

Psychoanalysis is a motivistic psychology. It is built upon the assumption that all mental abnormality is to be explained in terms of motive or desire and the only

way in which the psychoanalyst has been able to explain mental abnormality in terms of motive or desire has been by his ingenious but unwarrantable use of the concept of an "unconscious." Stephen Leacock, in one of his stories, tells of a man who was able to explain all the tricks performed by a conjuror, to his own satisfaction, in one and the same way. However strange and baffling a trick might be, whether it involved the appearance, disappearance or change of any article large or small, this man always explained it by saying that the conjuror had the article up his sleeve. The unconscious mind, for the psychoanalyst, would seem to serve the same function as the conjuror's sleeve served for the man in the story. Whenever a patient displays an abnormality of behavior for which no motive is apparent, the psychoanalyst can always explain it by saying that the motive or desire is in the unconscious, and, as no one can open up the unconscious to show that the alleged desire is not there, it is easy for anyone to offer an explanation of this sort to account for the occurrence of any phenomenon which he does not understand, and, in the language of the street, "get away with it." Freud has given us a method which makes it easy to explain the phenomena of mental disorder, but it is a method which takes psychopathology out of the realm of ordinary workaday science and into that of speculative philosophy where, released from the limitations of objective reality, the psychopathologist can give full play to his imagination and follow free and untrammelled where fancy leads the way.—Milton Harrington, M. D., in *Psychiatric Quarterly*, July, 1933.

The Influences that Have Moulded a Great Medical Library

(Concluded from page 48)

on my own hook regarding the Library. The Library is the property of each and all; it is contributed to in varying degrees by all; and it is for the convenience and good of all;—democratic in the best sense of the word, a feature that appeals to everyone.

Its management and personnel are excellent—none better. *Gott segnete dich*—God bless them each and all.

●

But there is another side. In this hour, after years of stress, the funds of the Library, very limited at best, are now sadly reduced despite the admirable administration of Dr. Rushmore. Moreover, the loss of the gold standard has greatly increased the cost of foreign works, and much important foreign material, as well as some domestic, can only be had by purchase.

And beyond this is the lack of space in all departments. The reading room is inadequate. The stacks are choked to the neck; if you wish to be convinced, ask the Librarian to show you through. And let me warn you that, unless you are right nimble, you will need care to avoid a bad tumble, or having the breath nearly squeezed out of you. Then our devoted curator, Dr. Maynard, needs suitable quarters to let us see the many objects of interest that he is collecting. And other interests of the Society clamor for more room.

It will therefore be imperative, as soon as general conditions permit, to go ahead. And we know from the campaign that gave us this present outfit, that everyone can give valuable aid. It was thought at that time that we were providing for fifty, or at least twenty-five years. Yet we began to be cramped long before that, and years have since flown. We have land enough. But the floor space must be doubled as a minimum estimate.

And—just a suggestion—possibly in your plans for that time you can include some Memorial, however modest, to that colleague of a century ago, who had such a short span of life in which to accomplish anything, who has been so long forgotten, and who left such a legacy, largely of the spirit, to us of the profession and to the public of Brooklyn and Long Island.

And one more pious wish—that there may be some amongst you, working for the Library and the Society, with a gift akin to that of Zachary Chandler, United States Senator and man of honor and distinction in Civil War Times, who had the magic art of arousing enthusiasm and bringing recruits to the flag by the legion, and of whom it was said "One whoop of Zach Chandler's voice was worth ten thousand men."

Correspondence

From the Retail Drug Code Authority for Greater New York

Editor Medical Times & L. I. Medical Journal:

One of the most serious complaints received by this Authority, is the practice of rebating or the giving of commissions by the retail Pharmacist to the Physician and the latter's acceptance of same.

While it is perfectly ethical and considered as no violation of the Retail Drug Code for a retail pharmacist to supply a physician with merchandise below his cost, the gratuitous payment of any sum by the pharmacist to the physician based upon the number of his prescriptions filled, is not only highly unethical but constitutes a definite violation of the Code of Fair Competition for the Retail Drug Trade.

Our purpose in writing to you is to secure the necessary publicity through such medium as may be at your command, with the assurance that your doing so will render a most distinctive service to our profession.

We feel certain that you will agree with us, that such practices while not reflecting a general condition, show an utter disregard for moral and ethical standards and that every effort should be bent toward the elimination of same.

May we therefore ask that you be kind enough to give this condition the publicity it deserves?

Should you desire any additional information, we shall be pleased to give it to you upon request.

Very truly yours,
Retail Drug Code Authority for N. Y.
SAMUEL A. WEISS, *Executive Secretary.*

New York, January 12, 1934

LONG ISLAND NEWS AND NOTES

The Mid-Year Meeting of the Kings County Dental Society will be held on Thursday, February 15th, 1934, 8:30 P. M., at the Brooklyn Academy of Music, Ashland Place and Lafayette Avenue.

The evening will be devoted to a symposium on "Oral Manifestations of General Systemic Diseases and their Sequelae." Dr. Joseph Colt Bloodgood of Johns Hopkins University will present the medical side of the question and Dr. Lester R. Cahn of Columbia University will give the dental viewpoint.

Preceding the symposium at 3:00 P. M. Dr. Bloodgood will give a clinic on "Neoplasms of the Oral Cavity," at the Brooklyn Cancer Institute, 109 Cumberland Street.

The following day, designated as "Mid-Year Clinic Day," will be devoted to clinics and topic discussions. These will be held from 10:00 A. M. to 4:00 P. M. at the Allied Dental Council quarters, 425 Lafayette Street, New York City.

A cordial invitation is extended to physicians, dentists, dental hygienists and nurses.

The World's Fair has made a fairly equal distribution of amebic dystentery.

MEDICAL BOOK NEWS

Edited by WILLIAM HENRY DONNELLY, M.D.

All books for review and communications concerning Book News should be addressed to the Editor of this department at 1313 Bedford Avenue, Brooklyn, New York

FEBRUARY, 1934

REVIEWS

Text-Book of Physiology

A TEXT-BOOK OF PHYSIOLOGY FOR MEDICAL STUDENTS AND PHYSICIANS. By William H. Howell, M. D. Twelfth Edition. Philadelphia, W. B. Saunders Company, 1933. 1132 pages, illustrated. 8vo. Cloth, $7.00.

Howell's Physiology has served so long and so well as a dependable textbook that no detailed reference to its scope and general make-up is called for in a notice of its twelfth edition; for, in these respects it has remained essentially the same since the issue, in 1905, of its first edition. Page by page comparison of any two, and especially of its first and latest, editions plainly shows, however, that its contents have been successively revised and amended in accordance with real advancement in knowledge of the subject without undue enlargement of the book and in keeping with the principles of its construction laid down in the preface to its first edition. Its progressively widening popularity during more than a quarter of a century has been deserved and gives promise that it will hold its own among medical textbooks for many years to come.

J. C. CARDWELL.

Biology of the Protozoa

THE BIOLOGY OF THE PROTOZOA. By Gary N. Calkins, Ph.D. Second Edition. Philadelphia, Lea & Febiger, 1933. 607 pages, illustrated. 8vo. Cloth, $7.50.

The Biology of the Protozoa by Gary N. Calkins is the type of work one would naturally associate with so eminent a name as that of the author. The volume bears out the expectation of the reader. This is the second edition of the valuable work and contains added chapters on parasitism and disease. The entire subject is extensively and clearly discussed in the author's well known style. For the medical man, the book may strike some as too technical, but it is well worth reading, since it covers a field in which much valuable information in relation to protozoal disease may be found.

MAX LEDERER.

Histopathology of the Peripheral and Central Nervous Systems

HISTOPATHOLOGY OF THE PERIPHERAL AND CENTRAL NERVOUS SYSTEMS. By George B. Hassin, M.D. Baltimore, William Wood & Company, 1933. 491 pages, illustrated. 8vo. Cloth, $6.00.

In this text-book we have a combination of an author, well qualified to write on the subject, and an excellent bookmaker. Dr. Hassin has covered this subject completely and in doing so, he has included sufficient details to make this book useful as a reference book and at the same time not too bulky to serve as a text-book. We believe this book deserves a place in the library of every physician.

ORMAN C. PERKINS.

International Clinics. 43rd Series, Volume 3

INTERNATIONAL CLINICS. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, etc. Volume 3, 43rd Series, 1933. Edited by Louis Hamman, M.D. Philadelphia, J. B. Lippincott Company, 1933. 316 pages, illustrated. 8vo. Cloth, $3.00.

This is another volume of this series, containing much of value. Four articles are given on diseases of the parathyroid glands; over-function, under-function, with the diagnosis and treatment and tetany of the new born. In medicine, twelve articles touch the field of the ductless glands, over and under weight, agranulocytic angina and allied conditions, infections, mononucleosis, pellagra, rest in pulmonary tuberculosis, clinical manifestations of rheumatic fever, digitalis administration, diabetes mellitus. In surgery an excellent article is presented on the management of acute head injuries.

The report of the clinical pathological conference, as usual is of exceptional value. It presents two patients with deep jaundice from different conditions of the liver. A review of the recent literature and progress in ophthalmology and otolaryngology is included in this issue.

Only by a study of this volume can one realize the value of the various articles presented.

HENRY M. MOSES.

Dementia Praecox—A Psychological Study

DEMENTIA PRAECOX. A psychological Study. By Harriet Babcock, Ph. D. New York. [Lancaster, Pa., The Science Press Printing Co.], 1933. 167 pages. 8vo.

This book is a study of the dementia praecox patient from the psychometric angle. 206 dementia praecox cases in the Manhattan State Hospital were compared with 216 non-psychotic persons. A distinction is made between the mental age which is taken to represent the individual's abstract intelligence and which is based on his result with the vocabulary test, and his mental efficiency which is taken to be his capacity to use his intelligence to bring about practical results and which is based on tests including amongst others, substitution, reproduction of paragraph, retention and learning paired associates. The difference between these two, the mental age and mental efficiency, is called the efficiency index. The statistical side of this book is very interesting and is, in our opinion, an important contribution to the study of the problem of dementia praecox. These statistics point to the presence of a low efficiency index in all cases of dementia praecox, and to the presence of retarded associations in the earlier stages of the disease. The author interpolates in her statistical review numerous remarks in defense of the physiogenic etiology of dementia praecox and just as many remarks opposed to the psychogenic view. The reader cannot help but receive the impression that the author has little first-hand experience with the psychogenic factors, which play such an important part in the etiology of dementia praecox. One would have preferred the author to adhere more closely to the statistical results of her investigation. This phase of her work is very painstaking and thorough and furnishes many leads for further investigation into the perceptive intellectual and volitional disorders of the mind. The chapters comparing the early cases with the deteriorated cases and comparing the learning ability of the four types of dementia praecox with each other are very interesting and instructive. The appendix gives individual reports of the patients who are in the deteriorated class.

JOHN M. SCHIMMENTI.

Text-Book of Medicine

A TEXT-BOOK OF MEDICINE. By American Authors. Edited by Russell L. Cecil, M.D. Third Edition. Philadelphia, W. B. Saunders Company, 1933. 1664 pages. 8vo. Cloth, $9.00.

Cecil reaches its third edition in six years. It is maturing rapidly. The new book contains articles on the Erythemas, on Radioactive Poisons, and on Hypotension which were not considered in earlier editions. Many other chapters have been completely rewritten by their original authors, few having escaped some alteration. About a dozen articles were re-

written by other authors, resulting on the whole in somewhat more authoritative statements, and of course, in slightly more modern view points. The new edition is a little more uniformly in line with the best current opinion, having gently modified some of the individualistic statements that characterized the younger book. It may be that time will reverse the situation as to some of these opinions. Such things have happened before. As the book stands, it takes first rank among the text books of medicine.

For the first time the table of contents states the author of each chapter, a matter of importance to everyone but the beginner. A further improvement would be the designation of the author at the beginning instead of the end of each article.

TASKER HOWARD.

History and Epidemiology of Syphilis

THE HISTORY AND EPIDEMIOLOGY OF SYPHILIS. By William Allen Pusey, M.D. Springfield, Ill., Charles C. Thomas, 1933. 113 pages, illustrated. 8vo. Cloth, $2.00.

This book is well worthy of consideration by one who likes to browse through the history of medicine, and particularly of so notable a disease as Syphilis. It contains only three chapters, "The Beginning of Syphilis," "Development of our Knowledge of Syphilis", and "Epidemiology of Syphilis", which are three lectures given by Dr. Pusey under the Adolph Gehrmann Endowment. They can be easily, and enjoyably, read in one evening.

Included in the first chapter is a great deal of evidence to settle the much disputed question as to whether Syphilis was really introduced to Europe at the time of the return of Columbus' men from their trip of exploration, or had existed there prior to that time. Opponents of the former theory will find it difficult to refute much of the evidence therein presented, and proponents will find more arguments to fortify their position.

In the second chapter the author introduces us to a galaxy of our wonderful predecessors whom we hear mentioned so frequently today. It is indeed a blow to our complacency to find out how much was definitely known of this disease so long ago, and what it meant to medicine, as witness the statement, "The study of Syphilis in the early 16th century started the modern trend of the study of medicine."

In the final chapter, the author brings us abreast of the times with information on the incidence of the disease, and the lessons learned during, and since, the World War, on prophylaxis. He also touches on the social side of prevention, decrying the fact that the "reservoirs" of Syphilis cannot be diminished, and indicating that a plan of education in the home is more vital than one of legislation, to accomplish that result.

E. ALMORE GAUVAIN.

Growth and Development of the Child. Part 1. General Considerations

GROWTH AND DEVELOPMENT OF THE CHILD. Part 1, General Considerations. Report of the Committee on Growth and Development. Kenneth D. Blackfan, M.D., Chairman. White House Conference on Child Health and Protection. New York, The Century Company, [c. 1932]. 377 pages. 8vo. Cloth, $3.00.

This is the first of four volumes upon this subject as developed from the White House Conference. Modern evaluations from many observations and untold research are summed up. Heredity and its interaction with environment, the data on identical and fraternal twins, consideration of the premature infant, classification of human types, are chapters that should be carefully studied. Statistics on sleep, fatigue and temperature regulation of the body offer entirely up-to-the-minute ideas in their relation to health and disease.

Atmospheric conditions, including air conditioning, are of particular moment, and other data on immunity and socio-economic factors as well as certain diseases, for example, diabetes, tuberculosis and rickets, make the volume a worthwhile addition to a medical library.

THURMAN B. GIVAN.

Growth and Development of the Child. Part II. Anatomy and Physiology

THE GROWTH AND DEVELOPMENT OF THE CHILD. Part 2, Anatomy and Physiology. Report of the Committee on Growth and Development. Kenneth D. Blackfan, M.D., Chairman. White House Conference on Child Health and Protection. New York, The Century Company [c. 1932]. 629 pages. 8vo. Cloth, $4.00.

This volume expresses a consummation of a detailed study of the appraisement of the child from the early stage of the embryo. The various systems are discussed separately and from quite a different angle than is found in any other volume in the reviewer's knowledge. For example, under the chapter on respiratory diseases, the effect of diseases of the nose and throat on growth is elucidated. Deafness due to disease of the nose and throat, the effect of improper diet on the respiratory mucous membrane, the effect on the child's weight of the removal of hypertrophied and infected tonsils and adenoids, enlarged cervical glands, the prophylactic effect of removal of tonsils and adenoids, the development of the paranasal sinuses and the effects of disease in them are all timely.

Mention should be made particularly of the digestive system. The anatomical growth and development of each part and organ is followed by the physiology and practical considerations of such subjects as hunger and appetite.

These publications should be freely used for basic information on the infant and child.

THURMAN B. GIVAN.

Diabetes Mellitus

DIABETES MELLITUS. A Handbook of Simplified Methods Diagnosis and Treatment. By I. M. Rabinowitch. Toronto, The Macmillan Company of Canada, Ltd., 1933. 246 pages. 8vo. Cloth, $3.50.

The discovery of insulin and the consequent revolutionary changes in the treatment of diabetes mellitus has created the need for the dissemination of accurate knowledge concerning the subject. There has been no end to "manuals" for the patient and a dearth of concise direct statements of the principle of therapy for the key man of medicine, namely the general practitioner. Such a book is Rabinowitch's "Diabetes Mellitus." Based on his lectures to students, Dr. Rabinowitch gives in a straightforward manner the accepted facts that have resulted from the cooperation of the many branches of the healing profession. In doing so he wisely avoids esoteric terms and controversial points unimportant to the practical handling of the diabetic patient.

The dietary treatment is by far the most practical and most successful from the view-point of actual results obtained. The author's statement ". . . the average individual will follow a prescribed diet only in direct proportion to its simplicity" cannot be over emphasized. In the experience of the reviewer, simplicity is an index of the practical value of any diabetic diet. The doctrine of simplicity has been followed throughout the book thus enhancing its value.

Dispensing with scales and the other refinements of hospital treatment, this book makes it possible for the physician unversed in diabetes to intelligently learn and prescribe diabetic diets without insulting his intelligence by the blind prescription of fixed tables, or jeopardizing the state of the patient's health. Dr. Rabinowitch has accomplished well what he has set out to do and the growing diabetic world will be thanking him for years to come.

DAVID GLUSKER.

Child Psychology

CHILD PSYCHOLOGY. By Buford J. Johnson. Springfield, Ill., Charles C. Thomas, 1932. 439 pages, illustrated. 8vo. Cloth, $4.00.

In this book, an attempt has been made to study the development of the child, both mentally and physically, by means of analytic studies of specific reactions.

In the opening chapter a study is made of growth. It is observed that such anatomical characteristics of height and weight are similar in their individuality as other responses such as learning. There is no relationship between size and mental ability; however, fatigue and under nourishment do impair mental faculties.

The problems of learning are next discussed, for learning implies a modification of responses. Various concepts are presented, in general the idea being that learning should be an acquisition of specific skills and specific knowledge.

In the succeeding chapters are described infant responses, as sucking, grasping, locomotion and manipulation. Other responses as attention, perception, thought, and emotions are analyzed. The concluding chapters are on the social behavior of children and the individual differences which must be adjusted to the demands of society.

There is an extensive bibliography. This book is recommended for reading by the entire profession.

STANLEY S. LAMM.

LIFE IN THE MAKING. By Alan F. Guttmacher, M.D. New York, The Viking Press. 1933. 297 pages, illustrated. 8vo. Cloth, $2.75.

The author has evidently spared no effort and time compiling such valuable data made convincing only by his own inimitable way.

One always reads with interest what our doctors of old had to say as to their methods of treatment and belief. The myths of those days are brought down today because we hear our patients expound those theories and beliefs at times of illnesses.

This book is excellent reading for the layman and interesting and historical for the physician.

NATHAN REIBSTEIN.

So You're Going to Have a Baby

SO YOU'RE GOING TO HAVE A BABY. By Helen Washburn. New York, Harcourt, Brace & Company, [c. 1933]. 195 pages. 12mo. Cloth, $1.50.

The material in this book is sound advice from a woman who really knows. She must speak from a well considered experience. In no sense a text book for young mothers, it contains all that they should know, cleverly set down in a delightful breezy style with a racy touch of the vernacular. It is a valuable book, full of common sense, easily read and highly recommended. Obstetricians will find no fault with it, except perhaps one: "The doctor and the hospital together cost from between three and four hundred dollars up to as much as you want to pay." The figures are high, for Brooklyn at least.

CHARLES A. GORDON.

Science of Radiology

THE SCIENCE OF RADIOLOGY. Edited by Otto Glasser. Springfield, Ill., Charles C. Thomas, 1933. 450 pages, illustrated. 8vo. Cloth, $4.50.

This 450 page volume is a thorough history of the discovery and development of the X-Rays and radium. It is a compilation in 25 chapters, by various authors, each especially qualified for the particular branch discussed. A perusal gives one an excellent review of a subject which probably produced the greatest advances in modern medicine during the past 40 years.

To understand any subject well, one must appreciate its development and historical background, which is the keystone of modern knowledge. To everyone therefore interested in Radiology—whether diagnostic or therapeutic—this book must find a favorable reception.

MILTON G. WASCH.

The Law Against Abortion

THE LAW AGAINST ABORTION. Its Perniciousness Demonstrated and Its Repeal Demanded. By William J. Robinson, M.D. New York. The Eugenics Publishing Company, 1933. 123 pages. 8vo. Cloth, $2.00.

Our attitude regarding sex matters has undergone an evolutionary change in the last fifty years so that at present we may probably compare its status to that of prohibition a few short months ago. We can talk freely about sex but its practical interference is governed by legal restrictions. The abortionist may be compared to the bootlegger. Sensing a still further trend towards liberalism in sex, Doctor Robinson has jumped one step ahead by demanding "complete and total abrogation of any law against abortion." That abortion may be required to save a girl from shame and suicide does not speak well for our social system and legalized abortion will probably stimulate moral laxity without getting at its source. There are certain pausible indications for abortion to which in the past we have been stubbornly opposed.

Whether or not one chooses to agree with Dr. Robinson, he is to be praised for his courage in discussing a vital issue with arguments that seem plausible. The recognition of the evils about which he speaks does not flatter our social system and those who are opposed to legalized abortion had better find some other means of correcting it before it is too late.

EMANUEL KRIMSKY.

Diseases of Infants and Children

THE DISEASES OF INFANTS AND CHILDREN. By J. P. Crozer Griffiths, M.D. and A. Graeme Mitchell, M.D. Third Edition. Philadelphia, W. B. Saunders Company, 1933. 1155 pages, illustrated. 8vo. Cloth, $10.00.

It is a pleasure to review this book as it is more practically useful than many on the same subject.

While the other aspects of disease are adequately covered, diagnosis and even more particularly treatment, are covered in a precise way, which a student or practitioner can use. There is full internal evidence of the large experience which we know the authors to have had, making their advice very personal.

In feeding, both infants and older children, their advice may be ultra conservative, both in variety and quantity, but of foods offered, the reviewer is inclined to feel that they allow all that is necessary to provide adequate vitamins and other food substances and such advice is, at least, a welcome contrast to the practice we often see of forcing on a child all or more than it can care for, apparently mainly that the practitioner may not be charged with omitting anything which his patient may have heard of having been given to a child of equal age.

We would cordially recommend the book to those whose practice includes children.

W. D. LUDLUM.

Therapeutic Uses of Infra-Red Rays

THERAPEUTIC USES OF INFRA-RED RAYS. By W. Annandale Troup, M.B. Second Edition. London, The Actinic Press, Ltd., 1933. 90 pages, illustrated. 8vo. Cloth, 6/6.

Although a small volume, this book contains a fund of extremely valuable information concerning the therapeutic uses of infra-red rays. Apparatus seldom seen in this country is described and its advantages clearly shown. The infra-red zone of the spectrum is large as compared to the visible portion, and affords many possibilities for therapeutic benefit when properly applied. The author gives an excellent presentation of the physics of infra-red radiation. He also devotes chapters to the description of the various sources of the radiation, indications for treatment and technique of its application.

The treatment of various parts and conditions is particularly well described. A very interesting chapter on the use of infra-red light in photography is appended.

The book is well written and clearly printed and illustrated, and can be highly recommended.

JEROME WEISS.

The Dynamics of Therapy in a Controlled Relationship

THE DYNAMICS OF THERAPY IN A CONTROLLED RELATIONSHIP. By Jessie Taft, Ph.D. New York, The Macmillan Company, 1933. 296 pages. 8vo. Cloth, $2.50.

The author is a psychologist of high professional standing, and one who has given many years of active work with problem children. She has written a book built around two case histories presenting serious problems in behavior disorders in children.

It is quite fascinating to read the case histories, and to get a glimpse behind the closed doors of the child guidance clinics that have held the interest of many socially inclined people. One reads with interest the result of the personal contact of the psychologist with the various patients, and the change in the behavior that follows from such contact.

The busy physician may profit by reading the accounts of a form of treatment with which he has very little familiarity, and to learn of the way many patients are treated in a manner quite unknown to him.

IRVING J. SANDS.

BOOKS RECEIVED

Books received for review are acknowledged promptly in this column; we assume no other obligation in return for the courtesy of those sending us the same. In most cases, review notes will be promptly published shortly after acknowledgment of receipt has been made in this column.

MATERNAL MORTALITY IN NEW YORK CITY. A Study of All Puerperal Deaths, 1930-1932. By the New York Academy of Medicine, Committee on Public Health Relations. Ransom S. Hooker, M.D. Director of Study. New York, The Commonwealth Fund, 1933. 290 pages. 8vo. Cloth, $2.00.

MYSTERY, MAGIC AND MEDICINE. The Rise of Medicine from Superstition to Science. By Howard W. Haggard, M.D. Garden City, N. Y., Doubleday, Doran & Company, 1933. 192 pages, illustrated. 12mo. Cloth, $1.00.

VOLUNTARY MOTHERHOOD. A Discussion of the Various Contraceptive Methods, with Emphasis on Generally Approved Techniques. Fourth Edition. By Antoinette F. Konikow, M.D. [Boston, Buchholz Publishing Company, c. 1933.] 36 pages, illustrated. 8vo. Paper, 50c. (Sold only to physicians for their own use, and for such distribution by them to their patients as may be legally permitted.)

AN OUTLINE OF IMMUNITY. By W. W. C. Topley, M.D. Baltimore, William Wood & Company, 1933. 415 pages. 8vo. Cloth, $6.00.

DIE BLUTTRANSFUSION. By Prof. Dr. F. Oehlecker. Berlin, Urban & Schwarzenberg, 1933. 87 pages, illustrated. 8vo. Paper, RM 4.

INTERNATIONAL CLINICS. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, etc. Volume 4, 43rd Series, 1933. Edited by Louis Hamman, M.D. Philadelphia, J. B. Lippincott Company, 1933. 317 pages. 8vo. Cloth, $3.00.

DIE HAUT-und GESCHLECHTSKRANKHEITEN. Hrsg. von Prof. Dr. Leopold Arzt und Prof. Dr. Karl Zieler. Lieferung 8. Pages 350 to 502, illustrated. Paper, RM. 8. Doppel-Lieferung 9/10. Pages 503 to 803, illustrated. Paper, RM. 14.40. Berlin & Wien, 8vo. Urban & Schwarzenberg, 1933.

THE PREGNANT WOMAN. By Porter Brown, M.D. New York, Eugenics Publishing Company, 1933. 174 pages, illustrated. 12mo. Cloth, $2.00.

HANDBOOK OF CHEMOTHERAPY. By Dr. Viktor Fischl and Prof. Dr. Hans Schlossberger. English Translation from the German, A. S. Schwartzman, M.D. In three volumes. Part 1, Metal-Free Organic Compounds. Baltimore, H. G. Roebuck & Son, 1933. 410 pages. 8vo. Cloth, $8.00. (Complete set $20.00. Volumes may be purchased separately; the purchase of Part One implies subscription to the remaining volumes.)

SURGICAL CLINICS OF NORTH AMERICA. Vol. 13, No. 6. (Pacific Coast Number.) December 1933. Issued serially, one number every other month by the W. B. Saunders Company, Philadelphia and London. Per Clinic Year (6 nos.) Paper $12.00. Cloth, $16.00.

PROBLEMS IN THE EDUCATION OF VISUALLY HANDICAPPED CHILDREN. By Ralph V. Merry, Cambridge, Mass., Harvard University Press, 1933. 243 pages. 8vo. Cloth, $2.50. (Harvard Studies in Education, Volume 19.)

Contemporary Progress

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questioned." In cases where there is no obstruction to the birth of the child, but poor uterine contractions in the second stage, pituitary extract may be used in doses of .5 to 1c.c.; it is better in the author's opinion, not to repeat the dose if expulsion does not occur. After delivery of the placenta the use of pituitrin in the full dose of 1 c.c., coincident with, or prior to, ergot, is indicated. In Cesarean sections pituitrin is valuable in the control of bleeding after delivery of the baby. The author notes that: "Labor is a battle between the forces of expulsion and the forces of resistance. Pituitary extract should never be used unless the forces of expulsion can easily overcome the forces of resistance."

Early Signs of Pre-Eclamptic Toxemia

F. J. Browne *(Journal of Obstetrics and Gynecology of the British Empire,* 40:1160, December, 1933) reports a study of 320 cases of pre-eclamptic toxemia in the Out Patient Clinic of the University College Hospital, London. In 56 per cent of this group hypertension was the sole evidence of toxemia, and in 75 per cent it was the earliest symptom. An early rise of blood pressure followed by an interval of normal blood pressure was found to be a frequent warning sign of a future permanent hypertension and toxemia (in 65 per cent). Toxic albuminuria followed hypertension in 34 cases; was discovered at the same time as the hypertension in 8 cases; preceded the development of hypertension in only 3 cases; and occurred without any rise in blood pressure in 10 cases. In 15 cases edema preceded the development of hypertension. In 33 cases edema was associated with albuminuria and in 54 cases it developed in the absence of albumin in the urine. The author concludes, that whatever the cause of pre-eclamptic toxemia, it is something that can cause each of the signs and symptoms directly; the three chief symptoms, hypertension, albuminuria and edema are produced independently; and the minor early symptoms, such as headache and sickness also seem to be due directly to the toxic agent rather than to cerebral edema or the vascular changes of hypertension.

Anatomical Variations in the Female Pelvis and Their Effect in Labor

W. E. Caldwell and H. C. Moloy *(American Journal of Obstetrics and Gynecology,* 26:479, October, 1933) distinguish four major types of female pelvis, on the basis of their examination of a large series of skeletal material. These types are: A. The gynecoid type—the normal pelvis of other classifications. B. The android type showing a resemblance to the human male pelvis, especially in the posterior segment of the inlet—representing the masculine and funnel types of other classifications. C. The anthropoid type, showing a resemblance to the pelvis of the anthropoid apes, with long antero-posterior diameter and relative or absolute decrease in the transverse diameter. D. The platypelloid type—the broad and flat pelves, which are rare types. A fifth type (E) is added for asymmetrical pelvis. All these types are subdivided on the basis of variations in the size of the subpubic angle: (1) With narrow outlet; (2) with moderate outlet; (3) with a wide outlet; (4) large or small. In the gynecoid type of pelvis, the small generally contracted form is the one of chief obstetric significance. This form of pelvis usually occurs in small women, and often the baby is small and can be delivered by the vaginal route; if there is relative disproportion and the head fails to engage, cesarean section is indicated. The android type of pelvis is, from the obstetric viewpoint, "the most dangerous form." With this type of pelvis, if the head engages in the transverse position, the prominent sacrum and narrow posterior pelvis force it forward into the narrowed anterior portion; and since there is a general convergence of the four walls of the pelvis, the head meets with increasing resistance as it descends. In the larger pelves of this type, arrest occurs in the mid-pelvis, where forceps are difficult to apply. If the extreme forms of this type are identified prior to labor, elective cesarean section should be advised. In the anthropoid type of pelvis, with contracted transverse diameter, the head can engage only in the anteroposterior diameter; a small baby may be delivered spontaneously. Delivery can often be best effected by delivering the head with forceps "in the persistent posterior position" without rotation after it passes the inlet. In the platypelloid type, the head must engage in the transverse diameter in the inlet, and should be allowed to descend in this diameter to the pelvic floor. If forceps are necessary, rotation should not be done until the caput can be "taken up" in the outlet during that rotation. This type of pelvis, as noted, the authors have found to be rare.

COMMENT

The obstetric significance of this work of Caldwell and Moloy is not generally known and the principles involved are certainly not applied in practice. While it is true that the experienced obstetrician, even if he is not an expert in pelvimetery, can and frequently does observe a "queer pelvis," and knows from experience that the labor in this particular type of pelvis is apt to be—usually is—abnormal, yet he cannot give you the real scientific reason for this observation. The authors have gone into this subject of the anatomical variations in the female pelvis as has never been done before and it would seem that sooner or later all obstetricians must know these facts as brought out in this work if they are to be called scientific obstetricians. Furthermore, this is going to necessitate a better and more accurate method of pelvimetry and a revamping of our present classification of the types of female pelvis. H. B. M.

Heart Disease in Pregnancy and Labor

F. B. Carr and B. E. Hamilton *(American Journal of Obstetrics and Gynecology,* 26:824, December, 1933) presents an analysis of 500 patients with heart disease studied during pregnancy and labor at the Boston Lying-In Hospital; these represent 1.11 per cent of the patients delivered. The great majority of these patients 472, or 94.4 per cent, had rheumatic heart disease; and in these cases uncomplicated mitral stenosis was the predominating lesion (77 per cent). In these 500 cases, the following complications developed before delivery: Hypertension in 48 cases; auricular fibrillation in 14 cases; paroxysmal tachycardia in 7 cases; and congestive heart failure in 96 cases. There were only 4 patients who developed complications after delivery directly attributable to their cardiac disease; the authors are of the opinion that if cardiac failure develops after delivery in a woman with heart disease who has not shown evidence of failure before, it indicates that some complication is present; in actual experience pulmonary embolism, sepsis and pneumonia have been found to be the chief factors in such postpartum cardiac failure. Only 4 patients showed congestive failure for the first time during delivery. There were 32 maternal deaths, or 6.4 per cent, in this series, 20 due to cardiac failure and one to bacterial endocarditis. Nearly one-half of these deaths occurred in emergency cases, *i.e.,* in those who had not been under the care of the hospital during pregnancy, but were admitted in a serious condition. The death rate, while averaging 6.4 per cent for the entire period, has been reduced from 12 per cent in the first few years to 3 per cent in recent years. From this study the authors conclude that the maternal death rate in cardiac cases can be reduced to a comparatively low percentage. One important factor in the reduction of the maternal death rate is the interruption of pregnancy in those that are definitely bad risks; the presence of congestive heart failure in a pregnant woman or a history of such failure indicates such a definitely bad risk; the presence of a complication in itself dangerous also makes the case a bad risk. Such "bad risk cardiacs" should be permanently prevented from becoming pregnant. In the control of cardiac patients that are to be carried through pregnancy, the enforcement of a carefully regulated regimen, providing for adequate rest, is the most important factor. If failure occurs, the patient should be hospitalized until delivered. Cardiac patients who are considered to be bad risks for prolonged labor, and those who develop cardiac failure, are best delivered by cesarean section. In the 500 cases reported, 101 were delivered by cesarean section, 67 of these "entirely for cardiac indications." Patients who are allowed to go into labor are routinely delivered at full dilatation.

COMMENT

The observation of heart disease complicating pregnancy and labor over a period of 12 years puts one in a position to know what one is talking about. The observation of 500 patients with heart disease studied during pregnancy and labor gives one the privilege of "speaking on the subject." Consequently we have a contribution by Drs. Carr and Hamilton that is without comparison so far as the reviewer is aware.

Both are "safe and sane" in their observations and management of such cases and more such studies—obstetricians and cardiologists cooperating—should be made. The obstetrician is well aware that the "last word" in the pregnant cardiac cannot be said until delivery is accomplished and the puerperal period is well under way. The cooperation of obstetrician and cardiologist, therefore, is most desirable—yes, essential—for the proper management of the cardiac who is pregnant.

H. B. M.